

INTERNATIONAL TROPICAL TIMBER ORGANIZATION

ITTO

PROJECT PROPOSAL

TITLE	DEVELOPMENT OF GUIDELINES FOR BUFFER ZONE MANAGEMENT FOR PULONG TAU NATIONAL PARK AND INVOLVEMENT OF LOCAL COMMUNITIES IN MANAGEMENT, SARAWAK, MALAYSIA
SERIAL NUMBER	PD 635/12 Rev.2 (F)
COMMITTEE	REFORESTATION AND FOREST MANAGEMENT
SUBMITTED BY	GOVERNMENT OF MALAYSIA
ORIGINAL LANGUAGE	ENGLISH

SUMMARY

When the Pulong Tau National Park (PTNP) was created in 2005, the local ethnic communities were not granted privileges to use the park's resources for subsistence, while the forests outside the park were already licensed for logging long before 2005. Many of the communities are still forest-dependent even up to the present day. The need to safeguard the Totally Protected Areas' (TPAs) rich resources from anthropogenic activities is becoming increasingly necessary and urgent. The development objective of the project proposal is to contribute to the integrated development of the buffer zone for environmental conservation and uplifting local communities livelihood. The specific objective is to secure the buffer zone's forest for use by indigenous communities and to strengthen the protection of Pulong Tau. These objectives will be achieved through the establishment of 6,000 ha of the buffer zone, and securing a forest base to meet the communities' needs. The project objectives and outputs will be met through integrated buffer zone management, training, and active involvement of primary and secondary stakeholders. The project will be sustained by Forest Department Sarawak (FDS) through its Community Service Initiative Unit (CSIU).

EXECUTING AGENCY FOREST DEPARTMENT OF SARAWAK

DURATION 24 MONTHS

APPROXIMATE
STARTING DATE TO BE DETERMINED

BUDGET AND PROPOSED SOURCES OF FINANCE	Source	Contribution in US\$	Local Currency Equivalent
	ITTO	517,450	
	Gov't of Malaysia	904,475	
	TOTAL	1,421,925	

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CHAPTER I – PROJECT BRIEF

In the past, Sarawak's national parks and wildlife sanctuaries (called Totally Protected Areas - TPAs) were managed principally with conservation as the main focus. Except for certain communities being granted special privileges to use resources in some TPAs, there has been no local involvement or consultation in conservation management. The ITTO - funded projects in Lanjak Entimau Wildlife Sanctuary (LEWS) and PTNP have demonstrated that TPA management must consider the needs of local ethnic communities that are still forest-dependent. A participatory approach in management and resource utilization involving local participants was also emphasized. Due to rapid socio-economic development in rural Sarawak and the people's continuing need for resources, potential threats to the resource-rich TPAs are becoming more real.

This project proposal introduces the concept of a buffer zone for the (PTNP) to make available an undisturbed forest resource base for use by local indigenous communities, and to provide additional protection to the park from socio-economic activities in the peripheries. The project's development objective is to contribute to integrated development of the buffer zone for environmental conservation and uplifting local community livelihoods. The specific objective is to secure the buffer zone's forest for use by indigenous communities and to strengthen protection of the national park (NP).

The objectives will be achieved through the establishment of 6,000 ha of forest to be managed as a buffer zone. The forest is located along the north-western boundary of PTNP where three timber licenses are currently in operation. Four Penan settlements are located inside the proposed buffer zone.

Project implementation will include construction of a field centre cum rangers' post at Long Manau for field work, training, monitoring and ecotourism. Baseline surveys to identify the resources will cover all major forest types. The Penan will be the main target for training as they are in most need of assistance. Training will prepare them for employment and participation in economic activities.

Training on socio-economic activities will focus on development of indigenous resources for livelihood improvement, such as cash crops, non-timber forest products (NTFP), fishery (*tagang* system to restore fish in rivers), PTNP and buffer zone management, and ecotourism. Inter-cropping of cash crops will be introduced. Suitable rivers for the *tagang* are tributaries of the Kubaan and the Tutoh River in the south where the Penan village of Long Sabai is located. The *tagang* will be a big income earner if it becomes successful, as several local fish are very popular and fetch very high prices. The people also need to learn about proper nutrition, health and hygiene, as malnutrition and diseases are common among the Penan. Whenever possible, the women will be encouraged to play active participatory roles in all the activities including management duties.

Expected influence on the Penan participants would be a change in mindset and attitude; they will have to believe that they can also make a better living for themselves like that enjoyed by the mainstream society. The process will take time, as many are still ignorant and have many things to learn; constant guidance will be critical. Outside assistance is important because without it many will not have the opportunity to learn new survival skills and will continue to depend on the forest for a long time to come.

Baseline surveys will collect information on the physical environment, forest ecosystems and biodiversity, and using the information for management. The buffer zone may be sub-divided into different use zones for communities, environmental and watershed protection, biodiversity conservation and research, and ecotourism. Active local community participation in management and utilization will be encouraged.

The project's field centre cum rangers' post at Long Manau will be maintained to continue the project's activities, to create management presence for PTNP and local participants. The CSIU from FDS and the buffer zone management committee (BZMC) will be directly responsible for ensuring that the project's sustainability.

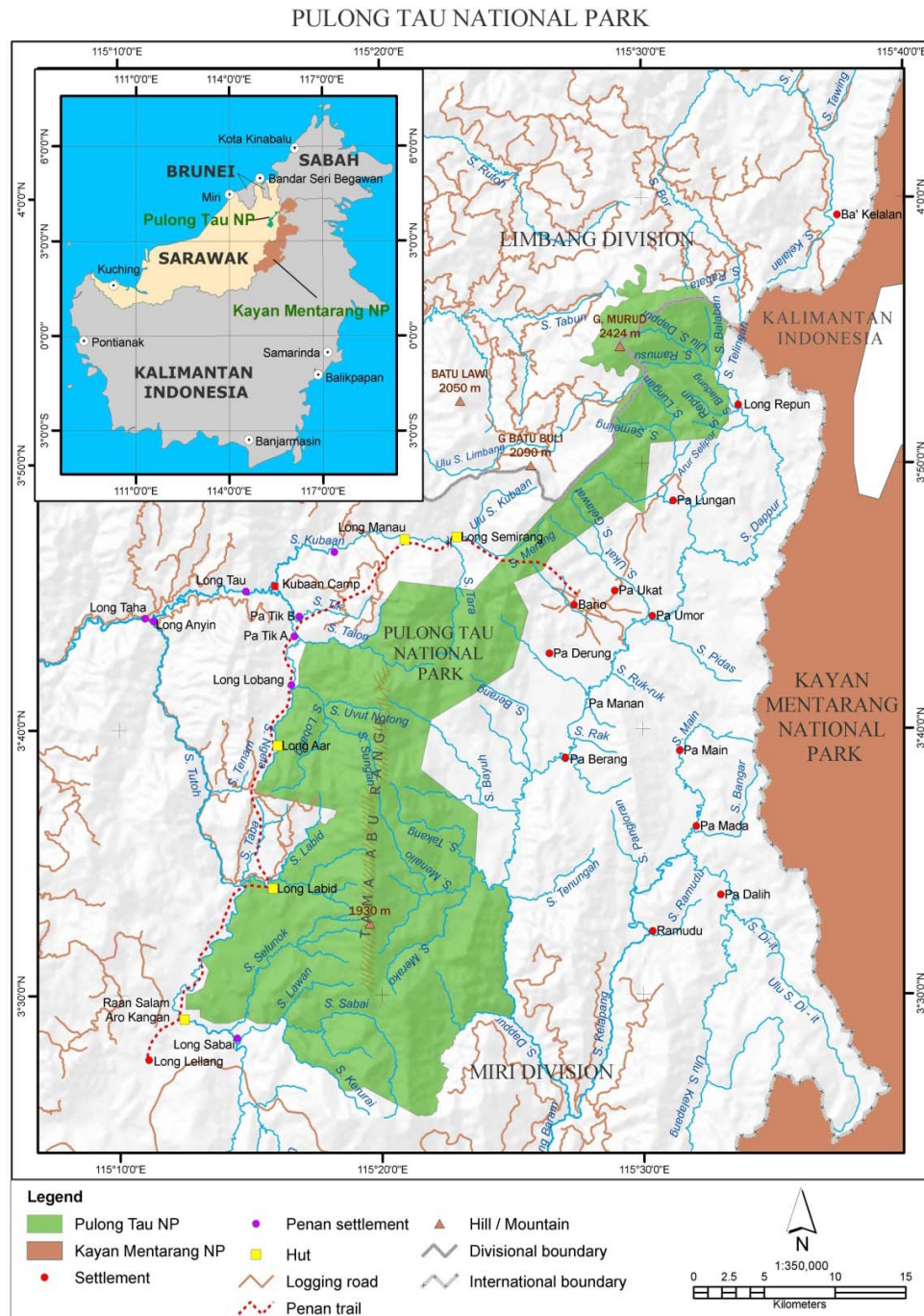
At the end of the project (i) successful participants will be able to use their newly acquired skills to improve their lives, enjoy better incomes and become more self reliant; (ii) the buffer zone management guidelines will be developed and endorsed, and (iii) PTNP become better safeguarded. The government will be requested to approve establishment of buffer zones for all TPAs in the state. With an additional 6,000 ha of buffer zone added and further extension to the PTNP, areas for watersheds and biodiversity conservation will be enlarged.

Key assumptions will be full and active support of primary and secondary stakeholders in buffer zone establishment - the key stakeholders will be timber companies operating in the area and local communities. Final approval for the buffer zone will come from the state government. It is also assumed that the buffer zone forest will have the necessary resources to meet the project's objectives. On buffer zone establishment, one likely risk will be objections from timber companies that have a stake in the resources. The government can help to mitigate this risk. There is also the risk of indigenous people showing no interest in the project. This will be unlikely for the Penan who are in need of assistance to eradicate poverty. Kelabit participants should also render their support in order to derive benefits from employment, ecotourism and trade. The PMU and project consultants will have to be equally committed. Foreseen problems in the field will be lack of access road, shortage of porters and frequent rain in the highlands that can lead to delays in project implementation.

The budget amount will be **US\$ 517,450 from ITTO and US\$ 904,575 from the Executing Agency (EA).** **Of the ITTO budget, 45% would go towards project personnel,** and 3% for capital items. Budget for capital items is low because the bulk of it will be provided by the EA. Other big budget items from the EA besides capital items would be transport and allowances for forestry staff, equipment and materials, and wages for porters. The high inputs from the EA will ensure better success for the project.

Abbreviations and Acronyms

asl	above sea level
BEM	Borneo Evangelical Mission
BZ	Buffer Zone
BZMC	Buffer Zone Management Committee
CF	Community Forest
CSIU/CSI	Community Service Initiative Unit
CSR	Corporate Social Responsibility
EA	Executing Agency
EPF	Employees Provident Fund
FDS	Forest Department Sarawak
GIS	Geographic Information System
GPS	Global Positioning System
ha	hectares
ITTA	International Tropical Timber Agreement
ITTO	International Tropical Timber Organization
JKKK	Village Development and Safety Committee
Ketua kampung	Village or longhouse chief
LEWS	Lanjak Entimau Wildlife Sanctuary
m	metres
NCR	Native Customary Right
NP	National Park
NRD	National Registration Department
NTFP	Non-timber Forest Product
PABC	Protected Areas and Biodiversity Conservation
PD	Project Document
Pemancha	Regional community chief
Penghulu	Community chief below the Pemancha
PFE	Protected Forest Estate
PL	Project Leader
PMU	Project Management Unit
PSC	Project Steering Committee
PTNP	Pulong Tau National Park
REDD+	Reducing Emissions from Deforestation and Forest Degradation Plus
RIL	Reduce Impact Logging
Rurum Kelabit	The Kelabit Society
SFC	Sarawak Forestry Corporation
SFM	Sustainable Forest Management
Tagang	A system to restore fish resource in natural rivers
TPA	Totally Protected Area
UNDP/GEF	United Nations Development Program/ Global Environment Facility
YPO	Yearly Plan of Operation



Map 1. Locations of Pulong Tau N.P. and Local Settlements

CHAPTER II - PROJECT FORMULATION

PART 1: PROJECT CONTEXT

1.1 Origin

In the course of implementing the on-going project PTNP phase II project PD 451/07 Rev. I (F), and aware of the current trend in socio-economic development in the rural areas that involve forest resources, in particular timber harvesting, it has become more apparent that greater effort would be needed in order to better safeguard the PTNP. The area of immediate concern is that along the north-west and western park boundary where three licenses are currently operating. The licenses are Orient Plus in the west, Jelita Timber and Ravenscourt in the north-west.

Another issue concerns the Penan, who live in four scattered villages along the north-west park boundary and inside the proposed buffer zone (see Map 2). Another village, Long Sabai, is located in the south and some distance away from the buffer zone. The Penan and their ancestors used to roam the forest in the Ulu Baram including the present Pulong Tau N.P.; and three families are still living a forest roaming life there. When the park was constituted in 2005, they were prohibited by law from entering the park. Outside the NP, the forest was already licensed for logging long before 2005. In many cases the license boundaries are located close to the settlements. This has left the people with very little forest in which to continue their hunting-gathering life. In protest, some villagers have physically barred logging contractors from working in coupes that are located next to their villages, resulting in conflicts between the licensees and the people. In some other parts of Sarawak, there have been instances of the Penan villagers putting up blockades in an attempt to keep the timber contractors out.

Presently, the only choice for the Penan is to continue to live a hunting-gathering life because they cannot participate in economic activities and have no employment skill, unless there is outside assistance. It is extremely difficult for the government to provide regular support as the villages are remote and widely scattered and without a road. Only some villages get to enjoy the 'flying doctor service' several times a year.

The problems faced by the Penan in the PTNP have been reported to the Executing Agency (EA), and around 2009, the then Director of Forests (Datu Haji Len Salleh Talif) granted them special (temporary) permission to use the park's resources for daily subsistence needs, but with the condition that they must not hunt protected animals and collect, damage or sell protected plants like orchids. The Director's decision, however, is unlikely to solve the problems in the long-term as the people's wish is to have a forest resource base that is safe from logging and environmental damage.

The ongoing PTNP project implemented several additional community activities to solve some of the urgent problems of the Penan people, like gravity-feed water supply and amenities, proper housing, training on cultivation of cash crops, and suspension bridges for safe river crossing by Penan children going to school in Bario. Uplifting the people to live above poverty level will require more time and effort.

The problems confronting the NP and the indigenous people were also brought up for discussion during the project's steering committee meetings on a number of occasions. To address the problems, the project steering committee (PSC) recommended the establishment of a buffer zone north-west of the PTNP. The decision to submit this new project proposal was made at the project steering committee meeting on 29th March 2011 with strong support from the members including some donors.

The functions of the buffer zone will be (i) to provide better safeguard to PTNP, (ii) to make available a resource-rich forest for the Penan to use in meeting their immediate and long term needs, (iii) to strengthen biodiversity conservation and ecosystem services of the PTNP. Through training, the proposed project can help Penan participants and others to change their lives to live above poverty level.

The project has the personal support of the second minister Datuk Amar Awang Tengah Ali Hasan in the Ministry of Planning, Resource and Environment, Sarawak who was very impressed with the efforts of the PTNP project to help the people.

1.2 Relevance

1.2.1 Conformity with ITTO's Objectives and Priorities

The ITTO is celebrating 25 years of operation this year, while continuing its effort to *actively promote and expand the diversification of international trade in tropical timber from sustainably managed and legally harvested forests, and sustainable management of timber producing forests*. These objectives are enshrined in the International Tropical Timber Agreement (ITTA) 2006 that will come into force soon. Apart from contributing to direct improvements in the forest sector, it is also the policy of ITTO to *contribute to sustainable development and poverty alleviation of forest dependent ethnic communities* that live in or near timber producing forests, leading to local community involvement in sustainable forest management (SFM) and biodiversity conservation.

The proposal also conforms with the ITTO Action Plan 2008-2011 Outcome 5F: *Support studies and other activities for the effective role of forest-dependent indigenous and local communities in securing the PFE as the tropical timber resource base and contributing to poverty alleviation*; and encourage members to *identify and implement innovative and socially sound interventions that contribute to poverty alleviation and improved livelihoods for forest-dependent people while securing the timber resource base*.

In fulfilling these objectives, the ITTO has supported several important projects in Sarawak, like the Lanjak Entimau Wildlife Sanctuary (LEWS) and (PTNP) projects. It was in the LEWS project that community involvement in sustainable development and transboundary cooperation was initiated. The PTNP project also collaborated with a local timber company to initiate rehabilitation of degraded areas and in uplifting local community livelihood.

Malaysian government and Sarawak State government's support to these objectives has led to the implementation of several international-funded projects during the past 15 years, such as those by the ITTO, UNDP/GEF and the Netherlands. The Federal and State governments are similarly supporting the Heart of Borneo initiative between Malaysia, Indonesia and Brunei to address the issues of SFM, biodiversity conservation and welfares of forest-dependent indigenous local communities.

The project is consistent with the ITTO Lebreille Action Plan 1998-2001, Goal 1 to encourage members to *"establish and manage forests for multiple-use in close cooperation with local forest owners and communities living in forest areas"*.

It is in compliance with the Yokohama Action Plan 2002-2006, Section 3.2: Reforestation and Forest Management:

Goal 1: Support activities to secure the tropical timber resource base, 5: *Assess opportunities for, and promote development of non-timber forest products and forest services which can improve the economic attractiveness of maintaining the forest resource base*.

Goal 2: Promote sustainable management of tropical resources, 10: *Establish and manage forests for multiple uses in close cooperation with local forest owners and communities living in forest areas*.

1.2.2 Relevance to the Submitting Country's Policies

At the national level, the proposal conforms to the Malaysia's National Forest Policy (revised 1993) to conserve and manage the nation's forests based on the principle of SFM, to protect the environment as well as to conserve biological diversity and genetic resources; and to enhance research and education.

At the state level, the project is in line with the Forest Policy (1954) to preserve permanently for the benefit of the present and future inhabitants forest land sufficient:

- (i) for the assurance of the sound climatic and physical conditions of the country; the safeguarding of soil fertility, and of supplies of water for domestic and industrial use, irrigation and general agricultural purposes; and the prevention of damage by flooding and erosion to rivers and to agricultural land;
- (ii) for the supply in perpetuity and at moderate prices of all forms of forest produce that can be economically produced within the country, and that are required by the people for agricultural, domestic and industrial purposes under a fully developed national economy;

In Sarawak, a total of 30 national parks and four wildlife sanctuaries with a combined area of over 500,000 ha have been gazetted as Totally Protected Areas under the National Parks and Nature Reserves Ordinance (1998) and Wild Life Protection Ordinance (1998). This will be extended to one million ha when all the proposed areas have been gazetted. The policies ensure a balance between conservation and economic development to benefit the State and its peoples.

In recognizing the role of indigenous local communities in achieving sustainable utilization, the Sarawak government has, through the support of ITTO since 1996, initiated studies in the LEWS and PTNP that actively involved local communities in the management of totally protected areas and development of NTFP, and has achieved good results. This present project will go a step further to introduce the concept of buffer zone for Sarawak's totally protected areas for integrated buffer zone management that incorporates environmental conservation and local community needs for resources.

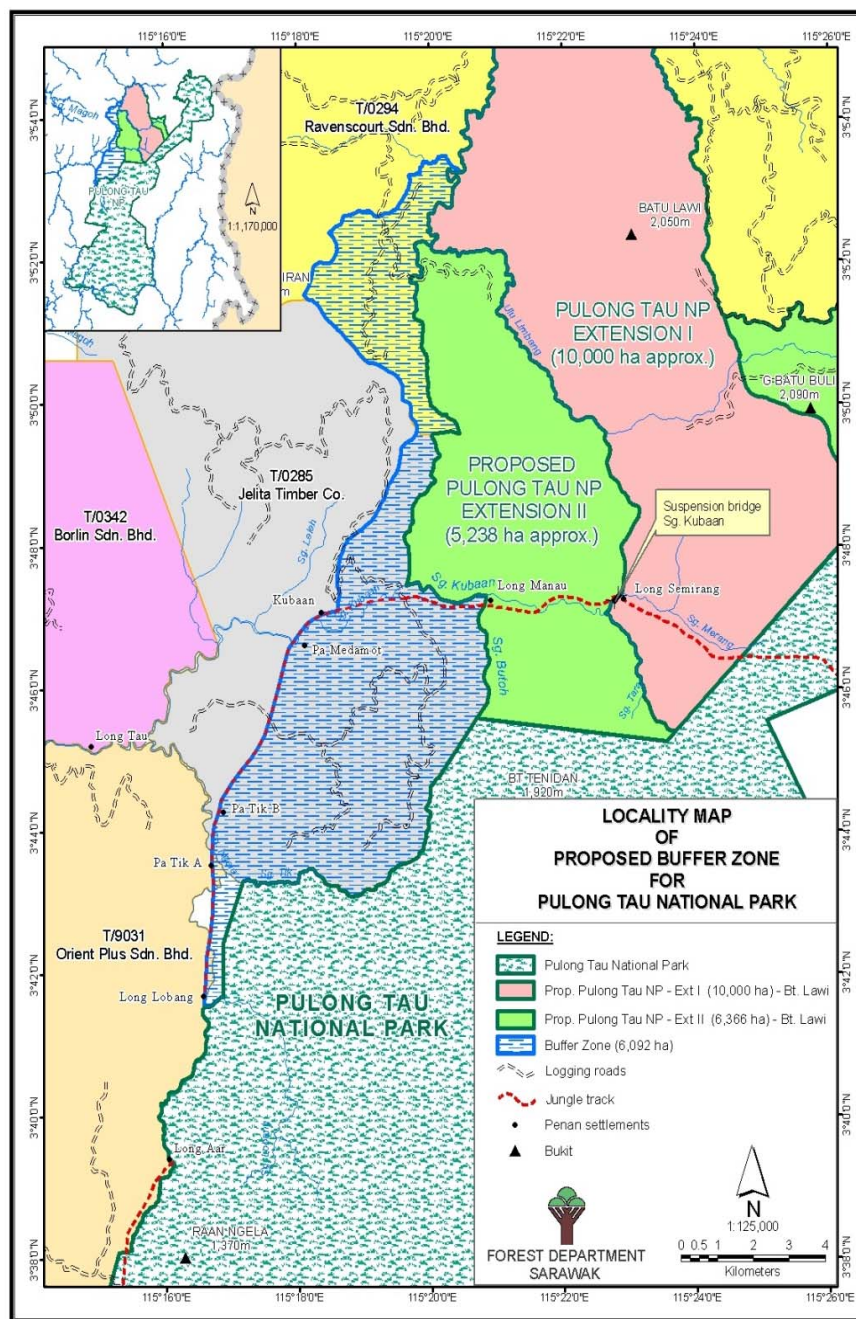
The proposal will explore innovative solutions to problems that are faced by the government in effective TPA management, poverty alleviation and improving local livelihoods.

1.3 Description of the Target Area

1.3.1 Geographic location

The PTNP, comprising an area of some 60,000 ha and located in Sarawak's northern highlands, is the site for the implementation of the ITTO-funded projects PD 224/03 Rev. I (F) and PD 451/07 Rev. I (F) - Transboundary Biodiversity Conservation: The Pulong Tau N.P., Phase I and Phase II, from 2005 to present. Due to its complex topography and wide altitude range from 500 m to over 2,400 m, the Pulong Tau N.P. is ecologically and biologically among the richest areas in the highlands. It contains at least seven major forest types and numerous sub-types – home to a diverse variety of plants and animals. The NP also serves the needs of three local ethnic communities that live around it.

Buffer Zone Features	
Size	6,000 ha
Elevation Range	750 to 1,500 m asl
Terrain	Flat to undulating, steep hills
Soils	Alluvial, sandy terraces, shallow peat and clay loam.
Forest cover	Alluvial forest, peat/kerangas forest, mixed dipterocarp forest, secondary forest



Map 2. Location of Proposed Buffer Zone for Pulong Tau N.P.

The proposed buffer of some 6,000 ha in size stretches along the north-western boundary of PTNP. Mixed dipterocarp forest (MDF) is the dominant forest on sandy clay loam soil on the hills. Members of the family Dipterocarpaceae provide the bulk of commercial timber from the genera of *Shorea*, *Dipterocarpus* and *Dryobalanops*. In forest with more sandy soils, large trees of *Agathis* are found. Called tumu in the Kelabit language, agathis timber is the main source of construction timber for the highland people, but the resource is being gradually depleted due to over exploitation by locals and from logging.

Forests on flat plains with alluvial deposits, shallow peat and sandy terraces occupy smaller areas compared to the MDF, and are ecologically and floristically very different and equally interesting.

Settlements and farms are located within this low and gentle terrain, where the soils are more fertile, and access to the rivers is easy.

Animal life is equally rich and diverse, although no proper survey has been carried out. Many examples that have been seen or reported are wild boar, sambar and mouse deer, macaques, binturong, sun bear, and flying squirrels; and many birds including hornbills and pheasants. Besides forest plants, cultivated fruit trees like *Artocarpus*, *Nephelium* also serve as an important food source for many of the animals.

Part of the proposed buffer zone to the west falls within the Jelita Timber Plus timber license, but the company has so far done very little logging there due to the area's long distance from their camp and frequent rain that renders road maintenance and logging operation very difficult and costly. Before this, some parts of the forest had been logged by some other timber companies but these forests have since recovered. The resource-rich forest is used by the Penan for timber, hunting and gathering. In 2011, under the on-going phase II project, 17 units of house were constructed for the residents of Ba' Medamot (Pa' Medamot on the map), with an additional one for visitors. The construction timber was obtained from such a forest.

More than two decades ago, Kelabit farmers used to live and farm in the area. After they left, many Penan families that decided to stop their forest roaming life built their homes in these abandoned farmlands. Such areas were preferred because there was no need to cut down big trees as the Penan had only bush knives at their disposal. The four Penan villages inside the proposed buffer are Ba' Medamot, Pa Tik A, Pa Tik B and Long Lobang to the south.

1.3.2 Social, Cultural and Economic Aspects

(a) Social Aspects - The highland areas comprise the Kelabit Highland and Maligan Highland, and are inhabited by the Kelabit, Lun Bawang and Penan communities, with an estimated total population of under 4,000 people.

The Kelabit live in many villages in the Kelabit Highland that is located east of the PTNP, with a population of 1,500 people. The Tama Abu Range forms the 'spine' of the NP and is a characteristic of the local landscape. The villages (longhouses) are widely scattered, with some close to the border with Kalimantan in Indonesia. Bario is the main settlement that is made up of some 20 villages and longhouses. Access to the villages is by a network of jungle trails that become muddy and slippery during rain. Walking time between villages can take between 45 minutes to two days. Bario as the administrative centre has offices for agriculture, immigration, police, a health clinic, and one lower secondary school and a primary school. A small air field caters for rural air service flights from Miri, Lawas and Marudi.

The highland's Kelabit chief is called the 'Pemancha' who is normally appointed by the government. Each longhouse or village is headed by a village chief or 'ketua kampong'. Together, these chiefs are responsible for peace and social order of the community, and are consulted by the people to solve various problems and disputes where necessary. Within a family, the man is the bread earner who also goes hunting and fishing, and helps in farming and buffalo rearing. Apart from doing house work, the women also work in the paddy and fruit farms. Most of the children begin their primary and lower secondary education in Bario and the village of Pa' Dalih (primary school only), then move to upper secondary schools in Miri, Lawas or Marudi; many go to universities.

The Lun Bawang people number about 2,000, and live in the Maligan Highland that is located north of the Kelabit Highland and north-east of the NP. Apart from slight differences in the language, the Lun Bawang share many similar cultural aspects with the Kelabit. The main settlement of Ba' Kelalan has 11 villages (no longhouses) and is located nearest to the park. Their chief is called the Penghulu which is below the rank of the Pemancha. Each village is similarly headed by a ketua kampong. Ba' Kelalan is connected by a weather road to Lawas town, and a small air field for rural air service is also available; flights are three times a week from Miri, Marudi and Lawas.

The Penan people of the upper Baram and Limbang were until some three decades ago, largely nomadic by living off the forests. The groups near Pulong Tau number about 350, and live in small simple villages outside the park boundary. They live in individual sub-standard huts instead of in longhouses. The huts are made largely of jungle poles and many with palm leaves for a roof. Many years ago, a local elected representative donated zinc roofing sheets to some villages; although rusted, these are still used because the people cannot afford new ones. Sleeping under one of these huts, one may get a good view of many 'stars' that are actually lights coming through holes in the leaking roof. The PTNP project was able to replace such huts at Ba' Medamot with proper housing in 2011, but one or two other villages also need help but are too remote.

Most huts are actually one-room units where the families cook, eat and sleep. For many, their properties consist of some cooking pots, jungle knives, blowpipes, and mats and sheets for sleeping. Many keep dogs as pets. The man does the hunting and fishing, and the women gather vegetables and fruits from the forest and cook.

(b) Cultural Aspects – Until the Borneo Evangelical Mission (BEM) came to the highlands after the Japanese invasion in 1940, the Kelabit and Lun Bawang people lived a traditional life that was rich in ethnic customs and beliefs, and almost every man drank and smoked. The BEM succeeded in converting the two ethnic communities to become followers. After this, the people gave up their old customs and beliefs and stopped drinking and smoking completely, and began to pray several times a day. Many of the children have benefited from the education provided by the Missionary; thus the Lun Bawang and Kelabit are among the most educated ethnic groups in Sarawak. Nearly all the graduates and professionals have left the villages to live and work in cities and towns, as government officers or in private sector; many also live overseas.

The Penan are far behind the other two groups in many aspects, but have also been converted to become BEM followers. Lacking skills in farming and employment, the forest is still their main life support system. Most parents have begun to send their children to school but many drop out after primary school, as the parents cannot afford to send them to study in the towns. Another reason is that many parents are very attached to their children and will not live apart from them. Many Penan still face the problem of not having identity documents that are necessary for employment and to enable secondary school students to receive financial aid from the government.

(c) Economic Aspects – Both the Kelabit and Lun Bawang are engaged in planting of wet paddy and fruits like pineapples, and rearing of buffalos to work in the paddy farms and for sale. Each family may own one to several paddy farm lots, and rice planting is done once a year. In the past, it was easy and cheap to engage Indonesian workers from across the border, but the Indonesians have stopped coming as wages are no more attractive. Nowadays, Penan workers are used although many are still quite unfamiliar with farming work. Many farms are left idle because elders who remain in the villages are no more capable of working in the fields. Nevertheless, many live a comfortable life with financial support from their children who work in the towns.

The rural air services and roads provide the only means of contact with the outside world. For Bario, it was only in 2011 that Samling Timber Company helped to complete the road connection to Miri City, enabling materials and agricultural goods to be transported by land – traveling time is at least 12 hours on a fine day and when the timber tracks are not damaged by rain. The road link between Ba' Kelalan and Lawas is 5 hours and the road conditions are much better.

The Kelabit and Lun Bawang are self sufficient in the rice and produce mineral salt from many mines in the area, and surplus is sold for cash. Fruits like pineapples are aplenty during the fruiting seasons, and wild vegetables, game meat and fish are often available locally. Other than these, most basic necessities have to be bought from the towns. Due to the high air and land transport costs, goods are many times more expensive by the time they reach the villages. Enterprising individuals and families in Bario and Ba' Kelalan have started simple business and own shops, work as contractors for government projects, or in tourism and home stay business. Tourist population is still small and irregular.

The Penan get some opportunity to earn some cash when they temporary move to Bario to be near their children attending school there. They work in the paddy fields, collect sand and stone for construction, or any other odd jobs that may become available. They have the habit of working one day and stopping the next day. Some work for the ITTO project teams, or government officers who occasionally travel to the area. There is little or no employment opportunity elsewhere, especially those that do not possess identity documents.

Although park's establishment in 2005 had the support of the local communities especially the Kelabit, certain groups were unhappy that they were no longer permitted to enter the park to collect timber and other forest products. To meet future needs of the Kelabit people for construction timber and firewood, the PTNP project has established a nursery in Bario to supply tree seedlings free for planting on idle land. The Penan will continue to use the forest for hunting, and gathering materials for food, tools and handicrafts.

The NP fulfills the environmental and socio-economic needs of all the highland communities, like clean water for drinking and irrigation, and timber and other resources. It and the adjacent highland areas have the potential to contribute to further economic advancement through agriculture and ecotourism with emphasis on culture, adventure and nature.

1.4 Expected Outcomes at Project Completion

Guidelines for buffer zone management will be developed and approved for implementation in the PTNP and other TPAs in Sarawak. The buffer zone for PTNP will address the issues of biodiversity conservation and research, ecosystems services, ecotourism, and local community welfare, the Penan in particular. A pilot study on the feasibility of implementing Reducing Emissions from Deforestation and Forest Degradation Plus (REDD+) will be carried out. The project will complement the government's effort to encourage community involvement in TPA management and social forestry by working directly with the Community Service Initiative Unit (CSIU) of Forest Department Sarawak (FDS) and the Sarawak Forestry Corporation (SFC). The CSIU will continue the work of ITTO at the end of the project. Expected outcome at project completion is summarized below.

- (a) Integrated buffer zone management will be developed and operational. A buffer zone (BZ) management committee comprising the CSIU, SFC and local communities will be established;
- (b) The Pulong Tau N.P. will be better safeguarded;
- (c) Training to enhance local participants' knowledge and skills in farming, handicrafts, employment and ecotourism will be conducted;
- (d) The buffer zone resource will be secured for local participants, in particular Penan from Ba' Medamot (or Pa' Medamot), Pak Tik A, Pak Tik B, Long Lobang and Ba' Tepen. Ba' Tepen (Bepan in the map) is a small Penan group with three families that are semi-nomadic;
- (e) Pilot study on the feasibility of implementing of REDD+ will be completed;
- (f) Change in awareness and attitudes of the local people with regard to environmental protection and conservation for mutual benefits.

PART 2: PROJECT RATIONALE AND OBJECTIVES

2.1 Rationale

2.1.1 Institutional Set-up and Organizational Issues

Forest Department Sarawak (FDS) will be the EA of the project, and will be assisted by SFC's Protected Areas and Biodiversity Conservation (PABC) Unit. The Community Service Initiative Unit (CSIU) of FDS

will be directly involved in project implementation. Regional Forest Offices outside of Kuching will provide manpower for forest surveying and community development work. PABC will assist in training on park management, ecotourism and awareness education, and running of the new rangers' station at Long Manau.

The Kelabit and Lun Bawang will be consulted through their Village Development and Safety Committees (JKKK). In addition, the Kelabit has another organization called the Rurum Kelabit (Kelabit Society). Important issues to be addressed will be land ownerships and customary rights claims by the people. The Penan do not village committees so the project team will work through their village chiefs and appointed representatives.

The timber license holders, in particular Ravenscourt (subsidiary of Samling) will demonstrate their corporate social responsibility (CSR) by helping to maintain roads to Bario and other villages, and providing other forms of assistance that may be requested by the people and the project. Jelita Timber Plus will be called upon to assist in project implementation, but the company's contributions to the project and people would depend on whether it will operate in the area in the next two years. The company will be consulted on BZ establishment. Orient Plus that has a small part of its license inside the buffer will similarly be consulted.

Lands and Surveys Department will assist in solving problems on land disputes and Native Customary Rights (NCR). Ownership concerns farm lands that were abandoned by Kelabit farmers and now occupied by Penan. If necessary, the Resident's and District offices in Miri and Marudi will also be called upon to assist as they are responsible for social-cultural interests of the people under their jurisdiction.

On training, the project would seek help from departments of Agriculture (crops and fishery), Medical (health) and Sarawak Museum (cultures) whenever necessary.

Remoteness and lack of a road, frequent rainy weather, and limited seats for rural flights to Bario are challenges that the project organizers will have to face in trying to bring materials, supplies and project personnel to the project site. This task will fall on the project management unit (PMU) and CSIU. The project will rely heavily on the Penan to carry materials and supplies from Bario to Long Manau, a two-day trek each way. Heavy and bulky materials and equipment can only be brought in by helicopter; it is also to save time.

Once the field centre at Long Manau is completed at the end of the first year, the EA and SFC will be expected to post some of their officers there to assist in project implementation and monitoring.

2.1.2 Stakeholder Analysis and Participation Plan

Local key stakeholders' needs were identified and assessed through the on-going PTNP project, PSC meetings, dialogues and workshops. **As noted, all the three local indigenous communities still depend on the forest in one way or another, but more so among the Penan. Commercial logging and establishment of the PTNP have reduced the forest base needed to sustain their livelihood, beside causing damage to the environment and resources.**

The Penan's livelihood problems are more difficult to address as they still live below poverty level and do not have a secured resource base and land to enable them to plan a secured future. Many still lack the knowledge or capacity to engage in farming, ecotourism and employment.

The Penan's local knowledge of the forest, plants and animals will be used in resource survey and management. They will also participate in the plans to develop NTFP and ecotourism to improve their income. Under the ecotourism plan, participants will be trained in hospitality and home stay and ecotourism product development. The products to be developed are culture, nature and adventure. They will also participate in farming of hill paddy, fruit trees, sago palms, tapioca and vegetables, and in *tagang* fishery and handicraft making.

Among the potential Penan candidates to participate in training on the above will be school leavers with minimum lower secondary education and are able to speak the local languages and some simple English. Suitable candidates will also be engaged as porters and guides.

In order to obtain full and effective participation the indigenous people will be informed that the BZ will be developed for them as their permanent resource base. This would instil in them a sense of ownership. They will also be informed that the economic-based activities developed by the project with their participation will be handed over to them to manage after they have been trained to do so. It is to be emphasized that only those that are genuinely interested and committed to improving their livelihood and income will benefit most from the project.

The participation plan for Kelabit and Lun Bawang communities will emphasize ecotourism resource development to ensure a better income; many are already involved in the business as tour agents and home stay providers. They can also help to train Penan in farming and work together to promote ecotourism and marketing of farm products. Their other involvement will be biodiversity survey and resource management.

At the end of the project, active participants will gain valuable knowledge and experience to prepare them for employment as research assistants, park rangers and park/tourist guides with PTNP, or to become self employed in tourism and farming business.

FDS and SFC have felt the need for additional safeguards for not only the PTNP but all TPAs under their charge. Potential threats from logging and plantation development and numerous forest-dependent indigenous communities are real. The two agencies are also responsible for protecting the environment and providing ecosystems services to all of Sarawak's population.

The role of the National Registration Department (NRD) is to issue identity documents (birth certificates and Mykads) to the people. Mykads (identity cards) are necessary to seek employment and for secondary students receiving government aid to open bank accounts. Many Penan still do not have these documents, and cannot afford to travel to NRD offices in the towns to apply and collect them later. As the project will be working in Penan areas, it can easily help to collect the names of new applicants, and arrange for them to come out to Bario where officers from NRD will be present to register them. More than 200 Penan benefited from such an assistance provided by the PTNP project in the past.

Stakeholder analysis and participation plan are summarized in Table 1.

Table 1. Stakeholders Analysis

Stakeholders	Characteristics	Problems, needs, key interest	Potentials	Type of involvement to the project
Primary stakeholders				
Local communities				
1. <u>Penan</u>	<u>Heavily forest-dependent life affected by logging, little or no education, lack employment skills, no opportunity to improve livelihood;</u>	<u>Live in isolation & below poverty line, forest for livelihood reduced due to logging, key interest is livelihood improvement but need outside assistance to acquire skills for employment or to</u>	<u>Local knowledge of forests & NTFP, folklore; can contribute effectively to BZ /PTNP development, ecotourism and NTFP</u>	<u>Will benefit most as primary beneficiaries through direct participation in buffer zone management and engaging in community development activities &</u>

	<u>Christians</u>	<u>become self employed</u>		<u>ecotourism; priority given to interested & proactive participants</u>
2. <u>Kelabit & Lun Bawang</u>	<u>Agriculture-based economy, educated, Christians</u>	<u>High cost of living, key interest to improve income via ecotourism & farming; need help & guidance to improve products</u>	<u>Local knowledge, co-management in project, farming, NTFP, ecotourism</u>	<u>Benefits through participation in NTFP development, ecotourism & employment; can help train Penan in farming; full participation will require them to be committed & proactive, emphasis on participants with such requirements</u>
3. Timber companies	Licensees & contractors in logging	Activities alleged to affect basic needs and livelihoods of local populations, can help to improve local livelihood	Collaboration in BZ management, REDD+, community development	CSR, various support to implementation & buffer zone establishment
Secondary stakeholders				
Forest Department Sarawak/Sarawak Forestry Corporation	Custodians of forests and totally protected areas	Needs primary stakeholders' support to safeguard PTNP, more on-ground management presence necessary	Leads TPA & buffer zone management, conservation, promotes community interests	Administrative, advisory and direct involvement in all aspects of project implementation
Residents/District Offices	Regional government administration	Responsible for community affairs, but weak link to rural communities due to large administrative areas and remoteness	Authority and influence in socio-economic development	Administrative support, advice on socio-cultural issues
Agriculture Dept.	Government agency	Plays key role in agricultural & fishery development; rural communities can better benefit from its presence	Expertise in agriculture and fresh water fishery	Provides training & advice
Lands & Surveys Dept.	Government agency	All land matters, solves land ownership claims/disputes	Knowledge on land matters and Land Code	Surveys lands to settle ownership claims, issues land titles, advisory

Sarawak Museum	Government agency	More effort needed to promote Penan culture & local knowledge	Knowledge on local ethnic cultures	Helps to preserve & promote cultural artifacts and folklore, training
Medical Dept.	Government agency	People suffering from poor health and malnutrition, need medical care	Medical and health services	Flying doctor service, training on first aid, gives medicines
Sarawak Tourism Board	Government agency	Ecotourism; lack of such information from the Penan	Ecotourism promoting Penan culture, local knowledge & interests	Issues tour licenses, monitors training, advisory
National Registration Dept.	Government agency	Difficulty in issuing identity documents to rural residents, needs outside assistance	Solves indigenous people's needs	Issues birth certificates and identity cards to Penan and others
Tertiary Stakeholder				
Erickson Air Crane	Private agency	Transportation	Solves transportation problem and time	Help airlift heavy materials

The Erickson Air Crane Company may at most be regarded as a tertiary stakeholder because their assistance would be temporary and will be engaged for one or two days only at the beginning of the project. They will be requested to airlift heavy building materials, equipment and other heavy items to the project site at Long Manau for the construction of the field centre cum rangers' post. The only other way to move these items will be by engaging porters to carry them through the forest, an extremely difficult if not impossible task. Normally, a one-way trek from Bario to Long Manau without carrying any heavy load will take two days.

2.1.3 The Problem Analysis

Before the onset of commercial logging some 30 years ago, the local ethnic communities lived in an undisturbed environment that was aplenty in forest resources, fish and game animals. Logging resulted in damage to the forest, erosion and pollution of rivers. In 2005 when some 60,000 ha of the forest was constituted as the PTNP, available resource base was further reduced.

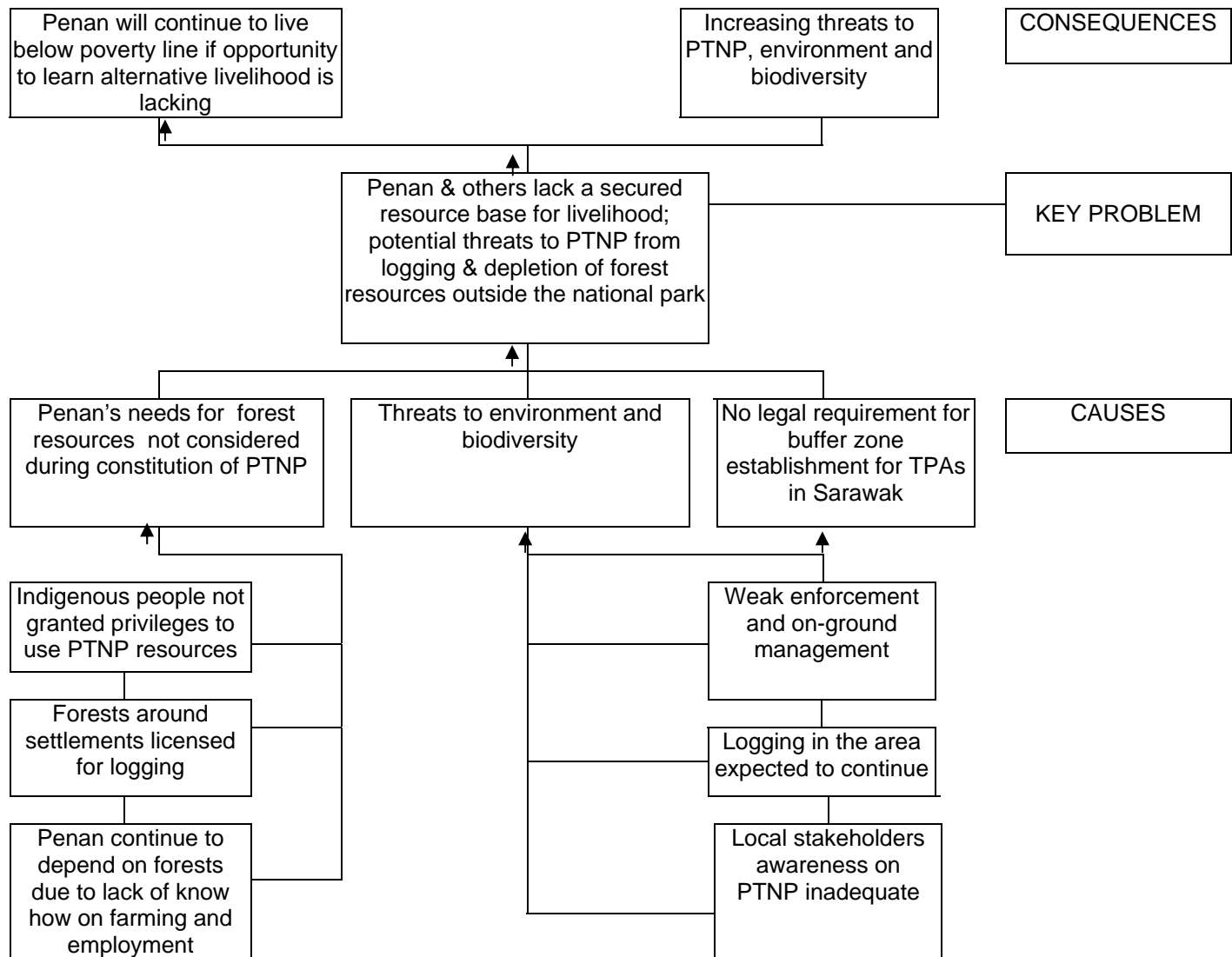
Before settling down, the nomadic Penan used to roam the forest that is now affected by logging and the area that is now the national park. With no knowledge of subsistence farming they were ill-prepared for a settled life. They had little choice but to continue too depend on the forest. The settlements along the western park boundary have been most affected by logging, and many have protested against the timber companies operating there. The buffer zone proposal provides a solution to secure a piece of undamaged forest for them to use before they learn to become self reliant. Many have been trying to learn paddy farming from their Kelabit friends but this support is *ad hoc* and not sufficient.

Although many Penan parents have been sending their children to school, most will stop at the primary school level, because their parents will not be able to afford further education without government support. With inadequate education and little prospects for employment, these children will return to live with their parents in the forest. With outside help (e.g. ITTO project), the young school leavers will have the opportunities to improve the knowledge, skills and experience needed to increase their prospects for employment or to become self employed.

The project will help the Kelabit and Lun Bawang to expand their income base if they make use of the opportunities to participate fully in the development of ecotourism and NTFP. The Penan cultures is an important ecotourism asset that can be fully tapped if all the indigenous are prepared to work in close cooperation.

Besides the local indigenous people, a few thousand other residents live in numerous towns, longhouses and villages in the lower Baram area and depend on potable water supply from the upper Baram. As many areas are already affected by logging and plantation protecting the PTNP and buffer zone water catchments and increasing the protected area for biodiversity conservation is vital.

The Revised Problem Tree

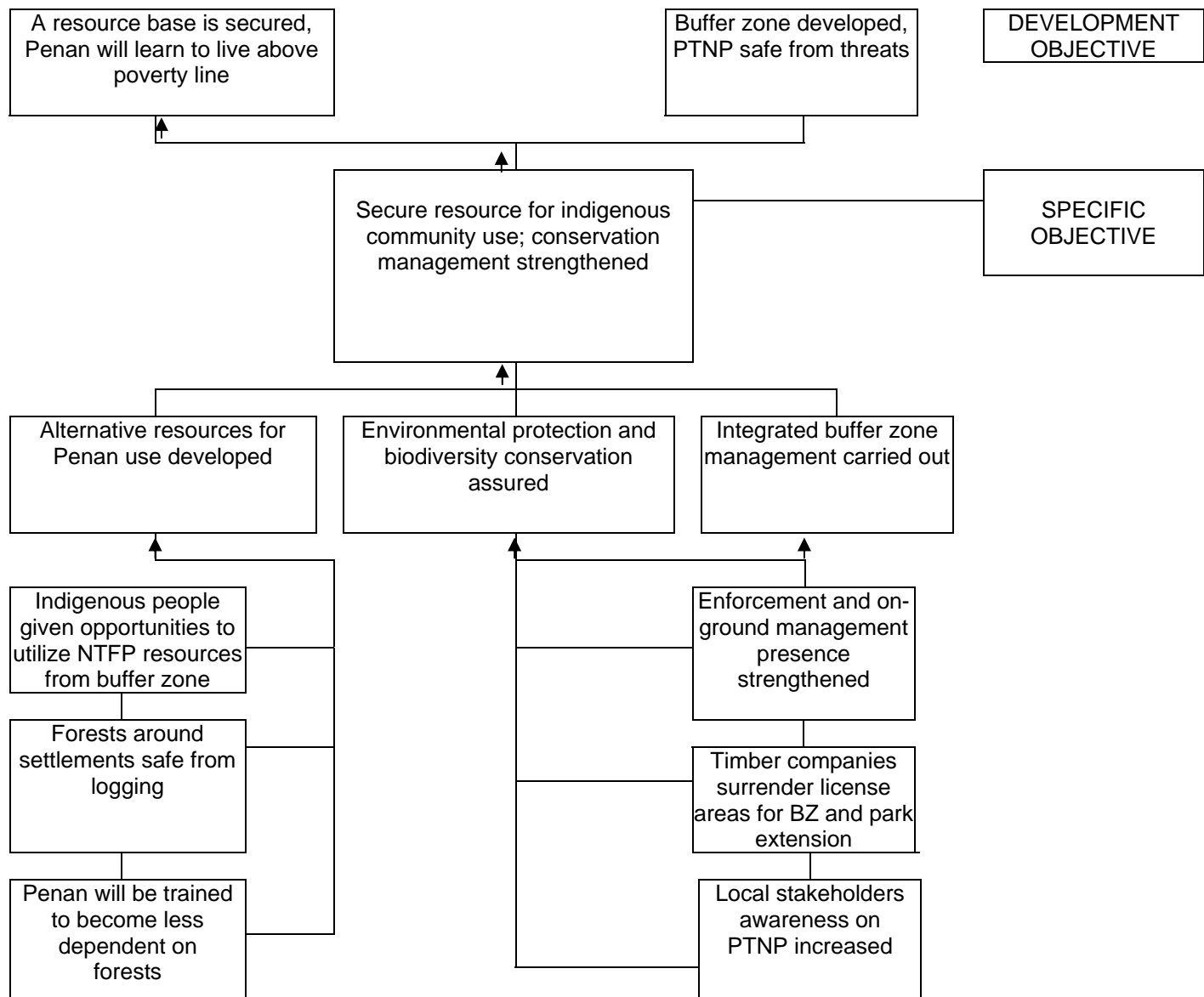


2.1.5 Logical Framework Matrix

INTERVENTION STRATEGY	MEASUREABLE INDICATORS	MEANS OF VERIFICATION	KEY ASSUMPTIONS
Development Objective To contribute to integrated development of buffer zone for environmental conservation and uplifting local community livelihood	Area for BZ confirmed and surveyed, conservation values and community use assessed, PTNP extension approved	Maps indicating different user zones developed, project progress reports, government gazette of park extensions	Continued political support and cooperation from private sector and local communities
Specific Objective To secure the buffer zone's forest for indigenous communities' use and to strengthen conservation management	Scientific, environmental & economic values of BZ determined	Progress reports, technical reports, management guidelines developed	Government acceptance of BZ concept for TPAs in Sarawak, timber companies & community support
Output 1 Buffer zone for integrated management established	Buffer zone surveyed, project field camp cum rangers' station at Long Manau developed and operational in the first year, project study team formed, BZMC formed	BZ boundary & land use maps, field activities organized and implemented, minutes of BZMC meetings, project progress reports	Support from primary & secondary stakeholders
Output 2 Baseline surveys of BZ resources and impacts of logging carried out and results published	Surveys completed by the end of Year 1, scientific data collected & analyzed, impacts of logging identified	Forest type maps and species lists prepared, project progress reports, technical reports	Buffer zone secured for community use and park protection, support from key stakeholders
Output 3 Training to develop livelihood improvement skills conducted	Training on BZ/CF management, agriculture, handicrafts & ecotourism organized	Records of participants trained, economic activities based on NTFP identified and developed, progress reports, technical reports	Support from key stakeholders, participation from Penan and others indigenous groups

2.2 Objectives

The Objective Tree



2.2.1 Development Objective and Impact Indicators

Development objective - The project will contribute to the integrated development of buffer zones for environmental conservation and uplifting local community livelihood.

The impact indicators that will be used to measure the project's contributions to the achievement of the project objectives are:

- A field base for buffer zone management will be established;
- By the end of year 1 all surveys on BZ resources and logging impacts will be completed and data analyzed;
- By early year 2 guidelines for integrated BZ management will be developed and approved;

- A recommendation for the establishment of buffer zones for all TPAs in Sarawak will be forwarded to the state government for consideration;
- Penan communities will be assured of a secured resource base to enable them to live a life that is free from environmental disturbance and pollution;
- Watersheds and biodiversity will be protected;
- BZMC will be formed and operational;
- The project will be sustained by CSIU of FDS and SFC with the help of local communities;
- On-ground management presence and enforcement will be strengthened;
- PTNP will be further extended.

2.2.2 Specific Objective and Outcome Indicators

Specific objective – To secure the buffer zone forest for indigenous communities' use and to strengthen conservation management.

The outcome indicators will be:

- Training programme for local participants will be completed;
- Opportunities for Penan for employment in the park and elsewhere will be enhanced;
- Economic activities to raise standard of living will be implemented;
- Facilities and materials for ecotourism promotion will be developed;
- A communal forest for each Penan village will be proposed if necessary;
- Local stakeholders will support BZ establishment and protection of PTNP.
- Improved relationships and tolerance between ethnic communities and settlement groups will be envisaged;

PART 3: DESCRIPTION OF PROJECT INTERVENTIONS

3.1 Outputs and Activities

Output 1 – Buffer zone for integrated management developed

This output will make preparations for the buffer zone to be established and managed. The final outcomes will be development of an integrated BZ management guidelines and further extensions to PTNP. The guidelines will be made suitable for use in other TPAs facing similar problems. A recommendation will be submitted to the government for establishment of buffer zones in other TPAs that are faced with similar problems as PTNP.

Activities

A1.1 – To create PMU, acquire staff and equipment, set up data base.

A1.2 – To construct project field centre cum rangers' post at Long Manau.

A 1.3 - To prepare an integrated buffer zone management guidelines, including study on REDD+.

A 1.4 – To pursue PTNP extensions.

Output 2 – Baseline surveys of buffer zone resources and impacts of logging carried out and results published

The buffer zone's ecosystems and biological resources must be studied as the information will be used to formulate the management guidelines. A study on the impacts of logging on the forest's resources will be relevant as parts of the forest inside the buffer zone were under timber license previously. The surveys will cover all existing forest ecosystems to collect scientific data on flora and fauna, and available resources for local use. Measures for their conservation and sustainable utilization will be proposed.

Activities

A 2.1 – To conduct ecological and floral survey and develop thematic maps.

A 2.2 – To conduct faunal survey.

A 2.3 – To publish results of ecological and biodiversity surveys.

A2.4 – To study the need for a communal forest for each of the Penan villages located inside the buffer zone.

Output 3 – Training to develop livelihood improvement skills conducted

The training will prepare participants to learn new survival skills to enable them to live a less forest-dependent life. Guidance throughout the training will be important as it will be a new experience for most participants. One or two Penan with higher secondary education will be recruited as assistant instructors.

Activities

A 3.1 – To conduct training on BZ management, farming, handicraft and ecotourism.

A 3.2 – To conduct training on development of NTFP resources.

A 3.3 – To conduct training on establishment and management of *tagang*, with a study tour to the successful *tagang* system at Long Lidong, Lawas.

A 3.4 - To assist the application of birth certificates and identity documents for the Penan and other indigenous communities living in the area.

3.2 Implementation Approaches and Methods

Approaches and methods to address the project's key problems will consider the following:

- **Identify and engage project consultants, research officers and resource personnel.** The personnel will be sourced from the EA (FDS, SFC), other government departments, private consultants, representatives from Penan and Kelabit communities, timber industry and local travel agencies.
- **Consultation with local key stakeholders.** Local knowledge will be provided by the Penan. They, the Kelabit community and timber companies will be consulted on BZ establishment and park extensions. The local communities will also be consulted on (i) any disputes concerning ownership of farm lands and fruit trees that were developed by Kelabit farmers and then abandoned, and now occupied by the Penan. The instrument to be used in this case will be the Sarawak Land Code. The Department of Lands and Surveys and Residents and District Officers in Miri and Marudi will be invited to assist; (ii) the types of NTFP that will be most suitable for development; and (iii) the need for communal forests for the Penan. FDS will lead all meetings and discussions, to be assisted by the project leader and PMU.

- Scientific data collected by consultants and research personnel will be used to develop an integrated guidelines for the buffer zone. This will also require inputs from relevant stakeholders in the government and private sectors. Measures to protect watersheds and biodiversity, and on conservation and research will be developed; areas for community use (communal forests) and ecotourism will be created.
- Establish a (BZMC) for management and monitoring. The project leader (PL) will, in consultation with the EA and local key stakeholders, form this committee. A participation plan will be appropriate, with the women included as they will be expected to play key roles in many economic activities.
- Participatory monitoring and evaluation to strengthen management and resource utilization will be important, and suitable local participants will be trained for this task. They need to gain new knowledge and develop confidence to play effective roles in strengthening enforcement, on-ground management and economic activities. Park wardens and rangers from the towns will have much to learn from local ethnic communities about the forests.
- Capacity building will include practical training of young researchers, park managers and rangers, to be conducted by project consultants and instructors from FDS and the SFC. For the indigenous participants, trainers and instructors will be sourced from Departments of Agriculture and Medical and Health, Sarawak Museum, Sarawak Tourism Board and tour agencies, whenever the need arises. Experiences of tour agencies in Bario and Miri in ecotourism would be valuable. New promotional materials will be needed.

The key project milestones will be:

- (i) State approval for establishment of the buffer zone for local use and to better safeguard the PTNP;
- (ii) Seek government approval to establish buffer zones for other TPAs faced with similar problems as PTNP;
- (iii) Guidelines for integrated BZ management approved and operational;
- (iv) BZMC instituted;
- (v) Local communities ready to participate in BZ management and monitoring, and in economic development;
- (vi) Penan will acquire the know how and confidence to become more employable and improve their lives, without too much dependence on outside assistance;
- (vii) Additional cash incomes from NTFP and ecotourism will be possible;
- (viii) Relationships between communities and local stakeholders will be improved.

3.2.1 Improving the Project's Sustainability

The CSIU and SFC will be involved in sustaining the project after completion. The specific role of the CSIU will be to continue the project work after completion. The SFC will deal with the overall administration and management of PTNP and the buffer zone.

The CSIU is headed by a senior forester who is assisted by a junior forester and a team of forest guards. This group of officers have worked with the ITTO projects in LEWS and PTNP for at least the past five years. Their abilities and talents are multiple, i.e. administration, planning, budget preparation, design and preparation of building plans, development of community-based activities, resource survey, social forestry and training. These officers will be fully equipped to continue the work after completion. If an officer is transferred to another unit the one replacing him will be suitably trained to take over.

The SFC personnel for PTNP normally consisting of a park warden, a number of park rangers and maintenance assistants, would already have basic training in park management and working

experience but should benefit from further training and exposure to field work. This can best be achieved through actively participating in project implementation and working with the project team.

To equip the indigenous communities to assume important responsibilities suitable young school leavers with basic education can be recruited as park rangers, enforcement officers and forest guards and given the necessary training. Although their education background may not qualify them for employment, the SFC has the jurisdiction to consider lowering the requirements and take into special consideration their local knowledge that is needed for management but which is lacking in the officers sent from the town. The project will provide the ideal environment to employ suitable candidates for training and preparing them for future employment by SFC. Others with no basic education but are rich in local knowledge, including women can be engaged as maintenance assistants, casual labourers or guides by SFC or FDS to work in the buffer zone project.

3.3 Work Plan

The work plan below indicates the time frame for implementing various activities and outputs

Work Plan

Outputs/ activities		Responsible party	Year 1 Quarter				Year 2 Quarter			
<u>Output 1</u>			1	2	3	4	1	2	3	4
A1.1	Create PMU, acquire staff & equipment, set up data base	EA (FDS)	■							
A1.2	Construct project field centre cum rangers' post at Long Manau	EA (FDS)		■	■					
A1.3	An integrated guidelines for buffer zone management prepared	EA/PL/CSIU/ Partners					■			
A1.4	Extension of Pulong Tau is pursued	EA/ PL				■				
<u>Output 2</u>										
A2.1	Conduct ecological and floral survey and develop thematic maps	EA/ PL		■	■	■				
A2.2	Conduct faunal survey	EA/PL		■	■					
A2.3	Publish results of ecological and biodiversity surveys	EA/PL							■	
A2.4	Survey, identify and propose communal forests for Penan villages located inside the BZ	EA/PL/locals			■					
<u>Output 3</u>										
A3.1	Conduct training on BZ management, farming, handicraft and ecotourism	PL/CSI			■	■	■	■	■	
A3.2	Conduct training on development of NTFP resources	PL/CSI/ Consultants			■		■	■	■	
A3.3	Conduct training on establishment and management of <i>tagang</i> , with a study tour to the <i>tagang</i> system at Long Lidong, Lawas	PL/CSI			■		■	■	■	
A3.4	Assist application of birth certificates and identity documents for Penan and other indigenous communities living in the area	PL/CSI		■				■	■	

3.4 Revised Budget

3.4.1 Master Budget Schedule

Outputs / Activities	Description	Budget Component	Quantity		Units	Unit cost US\$	Total cost US\$	ITTO		Exec. Agency
			Year 1	Year 2				Year 1	Year 2	
<u>Output 1</u>	<u>Buffer zone for integrated management developed</u>									
A 1.1	Create project management unit, the PSC and the buffer zone management committee									
	<u>Project leader</u>	<u>11</u>	<u>12</u>	<u>12</u>	<u>Man month</u>	<u>5,500</u>	<u>132,000</u>	<u>66,000</u>	<u>66,000</u>	<u>:</u>
	Project coordinator	1.1	12	12	Man month	3,000	72,000	-	-	72,000
	Chief local counterpart	1.2	12	12	Man month	1,875	45,000	-	-	45,000
	Forestry project support staff	1.3	12	12	Man month	-	144,000	-	-	144,000
	Forestry staff field allowances	3.3	12	12	Man month	-	50,000	-	-	50,000
	<u>2 research officers</u>	<u>12</u>	<u>12</u>	<u>12</u>	<u>Man month</u>	<u>2,000</u>	<u>48,000</u>	<u>24,000</u>	<u>24,000</u>	<u>:</u>
	<u>1 accountant/secretary</u>	<u>13</u>	<u>12</u>	<u>12</u>	<u>Man month</u>	<u>1,000</u>	<u>24,000</u>	<u>12,000</u>	<u>12,000</u>	<u>:</u>
	<u>EPF contribution 13%</u>	<u>14</u>	<u>12</u>	<u>12</u>	<u>Man month</u>	<u>1,105</u>	<u>26,520</u>	<u>13,260</u>	<u>13,260</u>	<u>:</u>
	Air travel inside & outside Malaysia	31	6	6	Trip	-	20,000	12,000	8,000	
	Air travel inside & outside Malaysia (EA)	3.1	8	8	Trip	-	50,000	-	-	50,000
	2 Generators	41	2	-	Unit	1,500	3,000	3,000	-	
	3 portable generators	4.5	3		Unit	1,000	3,000			3,000
	2 Computers	42	2	-	Unit	1,250	2,500	2,500	-	
	3 desktop computers	4.3	3	-	Unit	1,500	4,500			4,500
	2 communications	45	1	1	Unit	1,250	2,500	1,250	1,250	
	Office supplies	51, 5.2	1	1	Set	-	2,500	250	250	2,000
	PSC & BZMC meetings	32	2	2	Event	1,800	3,600	1,800	1,800	-
	Land cruisers	4.1	2	-	Unit	30,000	60,000	-	-	60,000
	4 Motorcycles	4.2	4	-	Unit	1,500	6,000	-	-	6,000
	3 GPS	4.4	3	-	Unit	1,000	3,000	-	-	3,000
	Camping equipment	4.6	1	1	Set	-	5,000	-	-	5,000
A 1.2	Construct project field centre cum rangers' post at Long Manau									
	Materials & construction	21, 5.2	1	-	Set	-	60,000	30,000	-	30,000

	<u>Furniture & stationeries</u>	<u>46,47</u>	<u>1</u>	<u>:</u>	<u>Set</u>	<u>:</u>	<u>15,000</u>	<u>3,000</u>	<u>:</u>	<u>12,000</u>
	Project field assistants	21	6	4	Man month	600	6,000	3,600	2,400	-
	Transportation including helicopter	53	2	1	Trip	-	20,000	15,000	5,000	-
	Logistics/ counterpart support	54	10	10	Man month	-	10,000	5,000	5,000	-
A 1.3	An integrated guidelines for buffer zone management prepared									
	Consultants	22	-	2	Man month	3,500	7,000	-	7,000	-
	Study on REDD+ in buffer zone	22	-	2	Man month	3,000	6,000	-	6,000	-
A 1.4	Extension of Pulong Tau is pursued									
	Technical assistants	23	4	-	Man month	700	2,800	2,800	-	-
<i>Output 2</i>	<i>Baseline surveys of buffer zone resources and impacts of logging carried out and results published</i>									
A 2.1	Conduct ecological and floral survey and develop thematic maps									
	Forest botanist	24	4	-	Man month	2,500	10,000	10,000	-	-
	2 field assistants	24	3	-	Man month	1,800	5,400	5,400	-	-
	Logistics and camping	24	6	-	Per pax	300	1,800	1,800	-	-
A 2.2	Conduct faunal survey									
	Biologist (mammals, birds, amphibians)	24	4	-	Man month	2,500	10,000	10,000	-	-
	2 field assistants	24	3	-	Man month	1,000	3,000	3,000	-	-
	Logistics and camping	24	4	-	Per pax	300	1,200	1,200	-	-
A 2.3	Publish results of ecological and biodiversity surveys									
	Reports	62		1000	Copies	5	5,000	-	5,000	-
A 2.4	Survey, identify and propose community forests and resources									
	Forest botanist	25	2	-	Man month	2,000	4,000	4,000	-	-
	2 field assistants	25	2	-	Man month	1,000	2,000	2,000	-	-
	Botanical assistant	25	2	-	Man month	1,000	2,000	2,000	-	-
<i>Output 3</i>	<i>Training for Penan and other participants to develop alternative resources for livelihood conducted</i>									
A 3.1	Conduct training on BZ management, agriculture, handicraft and ecotourism									
	Training officers	26	3	-	Man month	334	1,000	1,000	-	-
	Information material etc	61	1	1	Set	-	2,000	1,000	1,000	-
	Video cam, AV projector	43	1	-	Unit	2,000	2,000	2,000	-	-

	2 cameras	44	2	-	Unit	1,000	2,000	2,000	-	-
	Planting material, fertilizers	52	1	1	Set	-	3,000	1,500	1,500	-
	Tools and materials	52	2	-	Set	-	1,500	1,500	-	-
A 3.2	Conduct training on the development of NTFP resources									
	Promote NTFP at Long Manau	26	1	1	Unit	-	15,000	10,000	5,000	-
	Forest botanist	26	2	-	Man month	2,500	5,000	5,000	-	-
	2 field assistants	26	2	-	Man month	2,000	4,000	4,000	-	-
	Reports	62	-	300	Copies	6	1,800	-	1,800	-
A 3.3	Conduct training on establishment and management of tagang, with a study tour to the <i>tagang</i> system at Long Lidong									
	Fishery assistant	26	2	-	Man month	1,000	2,000	2,000	-	-
	<i>Tagang</i> system	26	6	-	Man month	500	3,000	3,000	-	-
	Fish feed	52	1	1	Set	-	1,500	750	750	-
	Study tour for 20 community participants to Long Lidong	26	1	-	Trip	-	4,500	4,500	-	-
A 3.4	To assist in application of birth certificates and identity documents									
	Staff travel & accommodation for applicants	27	1	1	Trip	-	4,000	2,000	2,000	-
	Support to community-based activities	6.1	1	1	Unit	-	300,000	-	-	300,000

3.4.2 Consolidated Budget by Component

Category	Description	Total	Year 1	Year 2
10	<i>Personnel</i>			
11	<i>Project leader</i>	<u>132,000</u>	<u>66,000</u>	<u>66,000</u>
12	<i>2 research officers</i>	<u>48,000</u>	<u>24,000</u>	<u>24,000</u>
13	<i>1 accounting/administrative officer</i>	<u>24,000</u>	<u>12,000</u>	<u>12,000</u>
14	<i>Employee's contribution to EPF</i>	<u>26,520</u>	<u>13,260</u>	<u>13,260</u>
1.1	Project coordinator	72,000	36,000	36,000
1.2	Chief local counterpart	45,000	22,500	22,500
1.3	Forestry project support staff	144,000	72,000	72,000
19	<i>S/Total</i>	<u>491,520</u>	<u>245,760</u>	<u>245,760</u>
20	<i>Sub-contracts</i>			
21	Project field station & rangers' post	36,000	33,600	2,400
22	Prepare buffer zone guidelines	13,000		13,000
23	Extension of PTNP	2,800	2,800	-
24	Ecological and biodiversity surveys	31,400	31,400	-
25	Survey, identify & propose communal forests	8,000	8,000	-
26	Training & study tour	34,500	29,500	5,000
27	Birth/identity documentation	4,000	2,000	2,000
29	<i>S/Total</i>	<u>129,700</u>	<u>107,300</u>	<u>22,400</u>
30	<i>Duty Travel</i>			
31	Travel inside & outside Malaysia	20,000	10,000	10,000
32	PSC & BZMC meetings	3,600	1,800	1,800
3.1	Travel inside Malaysia (EA)	40,000	20,000	20,000
3.2	Travel outside Malaysia (EA)	10,000	5,000	5,000
3.3	Staff field allowances	50,000	25,000	25,000
39	<i>S/Total</i>	<u>123,600</u>	<u>61,800</u>	<u>61,800</u>
40	<i>Capital Items</i>			
41	Generators	3,000	3,000	-
42	Computers	2,500	2,500	-
43	video camera, AV projector	2,000	2,000	-
44	Cameras	2,000	2,000	-
45	Communications	2,500	1,250	1,250
46	Furniture & stationeries for rangers' station	3,000	3,000	-

4.1	Land cruisers	60,000	60,000	-
4.2	Motorcycles	6,000	6,000	-
4.3	3 Desktop computers	4,500	4,500	
4.4	GPS	3,000	3,000	-
4.5	Generators	3,000	3,000	-
4.6	Miscellaneous camping equipment	5,000	4,000	1,000
4.7	<u>Furniture & stationeries for rangers' station</u>	<u>12,000</u>	<u>8,000</u>	<u>4,000</u>
49	<u>S/Total</u>	<u>108,500</u>	<u>102,250</u>	<u>6,250</u>
50	<i>Consumable Items</i>			
51	Office supplies	500	250	250
52	Planting materials, fertilizers, fish feed, etc.	6,000	3,000	3,000
53	Transportation including helicopter hire	20,000	15,000	5,000
54	Logistics/counterpart support	10,000	5,000	5,000
5.1	Office supplies	2,000	1,000	1,000
5.2	Miscellaneous consumable items	30,000	30,000	
59	<u>S/Total</u>	<u>68,500</u>	<u>54,250</u>	<u>14,250</u>
60	<i>Miscellaneous</i>			
61	Information & training materials, guide books, etc.	2,000	1,000	1,000
62	Publications	6,800		6,800
6.1	Support to community-based activities	300,000	150,000	150,000
69	<u>S/Total</u>	<u>308,800</u>	<u>151,000</u>	<u>157,800</u>
70	<u>National Management Cost</u>			<u>117,975</u>
80	<i>Project Monitoring and administration</i>			
81	ITTO monitoring & review	20,000		
82	ITTO mid-term evaluation	-		
83	ITTO final evaluation	15,000		
84	ITTO ex-post evaluation	-		
83	<u>ITTO Programme support (8% of 11-84)</u>	<u>38,330</u>		
89	<u>Sub-total</u>	<u>73,330</u>		
100	<u>GRAND TOTAL (517,450 + 904,475)</u>	<u>1,421,925</u>		

3.4.3 ITTO Budget by Component

Category	Description	Total	Year 1	Year 2
10	<i>Personnel</i>			
11	<i>Project leader</i>	<u>132,000</u>	<u>66,000</u>	<u>66,000</u>
12	<i>2 research officers</i>	<u>48,000</u>	<u>24,000</u>	<u>24,000</u>
13	<i>1 accounting/administrative officer</i>	<u>24,000</u>	<u>12,000</u>	<u>12,000</u>
14	<i>Employee's contribution to EPF 13%</i>	<u>26,520</u>	<u>13,260</u>	<u>13,260</u>
19	<i>S/Total</i>	<u>230,520</u>	<u>115,260</u>	<u>115,260</u>
20	<i>Sub-contracts</i>			
21	Project field station & rangers' post	36,000	33,600	2,400
22	Prepare buffer zone guidelines	13,000		13,000
23	Extension of PTNP	2,800	2,800	
24	Ecological and biodiversity surveys	31,400	31,400	-
25	Survey, identify & propose communal forests	8,000	8,000	
26	Training & study tour	34,500	29,500	5,000
27	Birth/identity documentation	4,000	2,000	2,000
29	<i>S/Total</i>	<u>129,700</u>	<u>107,300</u>	<u>22,400</u>
30	<i>Duty Travel</i>			
31	Travel inside & outside Malaysia	20,000	12,000	8,000
32	PSC & BZMC meetings	3,600	1,800	1,800
39	<i>S/Total</i>	<u>23,600</u>	<u>13,800</u>	<u>9,800</u>
40	<i>Capital Items</i>			
41	2 generators	3,000	3,000	
42	2 computers	2,500	2,500	
43	1 video camera, 1 AV projector	2,000	2,000	
44	2 cameras	2,000	2,000	
45	Communication	2,500	1,250	1,250
46	Furniture & stationeries for rangers' station	3,000	3,000	
49	<i>S/Total</i>	<u>15,000</u>	<u>13,750</u>	<u>1,250</u>
50	<i>Consumables Items</i>			
51	Office supplies	500	250	250
52	Planting materials, fertilizers, fish feed, etc.	6,000	3,000	3,000
53	Transportation including helicopter hire	20,000	15,000	5,000
54	Logistics/counterpart support	10,000	5,000	5,000
59	<i>S/Total</i>	<u>36,500</u>	<u>23,250</u>	<u>13,250</u>

60	Miscellaneous			
61	Information & training materials, guide books, etc.	2,000	1,000	1,000
62	Publications	6,800		6,800
69	S/Total	8,800	1,000	7,800
70	National Management Cost	(see Exec. Agency budget)		
80	Monitoring, evaluation, administration			
81	ITTO monitoring and review	20,000		
82	ITTO mid-term evaluation	-		
83	ITTO final evaluation	15,000		
84	ITTO ex-post evaluation			
85	ITTO program support (8% of 11-84)	38,330		
89	Sub-Total	73,330		
100	ITTO Total	517,450		

3.4.4 Executing Agency Budget by Component

Category	Description	Total	Year 1	Year 2
1	Project Personnel			
1.1	Project coordinator	72,000	36,000	36,000
1.2	Chief local counterpart	45,000	22,500	22,500
1.3	Forestry project support staff	144,000	72,000	72,000
1.9	S/Total	261,000	130,500	130,500
3	Duty Travel			
3.1	Air travel within Malaysia	40,000	20,000	20,000
3.2	Air travel outside Malaysia	10,000	5,000	5,000
3.3	Staff field allowances	50,000	25,000	25,000
3.9	S/Total	100,000	50,000	50,000
4	Capital Items			
4.1	2 land cruisers	60,000	60,000	-
4.2	4 motorcycles	6,000	6,000	-
4.3	3 desk top computers	4,500	4,500	-
4.4	3 GPS	3,000	3,000	-
4.5	3 portable generators	3,000	3,000	-
4.6	Miscellaneous camping equipment	5,000	4,000	1,000
4.7	<u>Furniture & stationeries for rangers' station</u>	<u>12,000</u>	<u>8,000</u>	<u>4,000</u>
4.9	S/Total	93,500	88,500	5,000
5	Consumable items			
5.1	Miscellaneous consumables	30,000	30,000	
5.2	Office supplies	2,000	1,000	1,000
5.9	S/Total	32,000	31,000	1,000
6	Miscellaneous			
6.1	Support to community-based activities	300,000	150,000	150,000
6.9	S/Total	300,000	150,000	150,000
-	Component Total	786,500	450,000	336,500
	Management Cost (15%)	117,975		
	GRAND TOTAL (786,500 + 117,975)	904,475		

3.5 Assumptions, Risks and Sustainability

Forest Department Sarawak (FDS) has long experience in executing many ITTO projects since 1993 in the areas of baseline research on ecology and biodiversity, and working with local communities to implement community-based activities. This project is regarded as a continuation of the PTNP project for which State financial allocations for years 2012 and 2013 have been secured.

Risks and mitigation measures are summarized below.

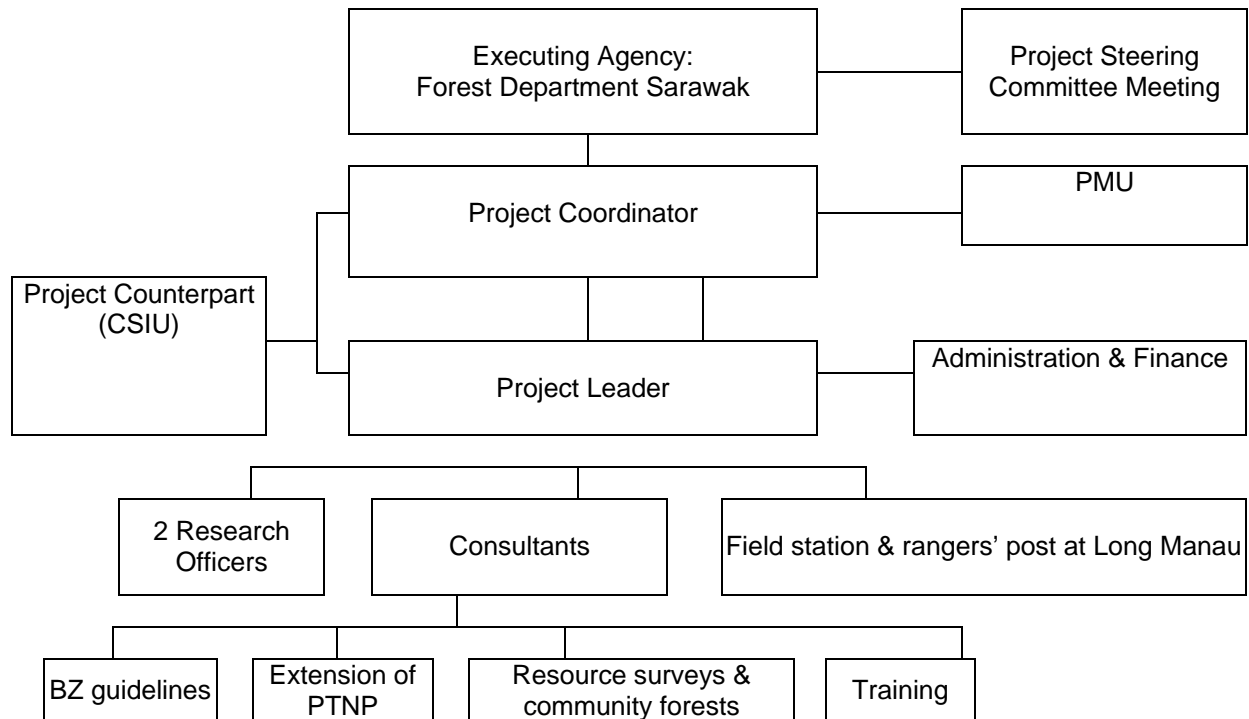
Risk	Mitigating measures
Local communities do not give full cooperation	Dialogues to explain project & benefits
Environmental disturbance due to continued logging	Negotiation/consultation with timber companies, RIL, intervention/monitoring by FDS and SFC
Conflicts between BZ use and logging	Negotiation with timber companies, publicity
Settlement & land use issues	Dialogues with Kelabit & Penan land users, intervention by government
Lack of community support in development & training	Unlikely; to explain benefits of project
Delay in material transport if logging helicopter not operating in nearby license areas	Seek government help for helicopter, engage local porters
Increased travel & material costs	Reduce travel & needs for materials without affecting project implementation, inputs by government
Remoteness, poor telecommunication, rainy weather	Unavoidable; satellite phones to be used, adjust field schedules, adjust deadlines for completion

Project sustainability. The new CSIU under FDS was created with the purpose of continuing the project work of ITTO in Lanjak Entimau and Pulong Tau, including this buffer zone project if approved and implemented. The Unit will monitor and evaluate progress of community-based activities, maintain the field centre, and play a leading role in BZ management.

PART 4: IMPLEMENTATION ARRANGEMENTS

4.1 Organizational Structure and Stakeholder Involvement Mechanisms

Revised Project Organization Chart



4.1.1 Executing Agency and Partners

Forest Department Sarawak (FDS) will be entrusted with the responsibility of implementing the project on behalf of the Malaysian Government. The overall responsibilities of the EA will include financial control and audit, administration and project implementation. The Malaysian Government will sign an agreement with the ITTO containing conditions and rules for the EA to follow.

The EA will ensure that qualified and suitable consultants are engaged to help in project implementation, as it has done in the past. Similarly, it will also establish a good and cordial working relationship with local partners based on mutual understanding and trust. Local partners like timber companies and local communities will be strong supporters of the project. The EA will consult various government organizations like the Residents' offices, District offices, Department of Agriculture, etc. for advice and administrative support.

For smooth coordination, the EA will appoint an ITTO Project Coordinator and a Chief Local Counterpart from among its senior officers to work with the PL. The CSIU of FDS will be directly involved in project planning and implementation.

4.1.2 Project Implementation Team

The team will be led by the Project Coordinator and assisted by a chief local counterpart from FDS. The PL will play a key role in project planning and implementation, prepare yearly plan of operation, supervise work of consultants and prepare progress reports and technical reports.

4.1.3 Project Steering Committee

The PSC will be the key decision making body, comprising members from ITTO Secretariat, donor representatives, federal and state ministries, FDS, and other relevant government bodies or stakeholders. The committee will oversee project implementation, review project activities and expenditures, and make recommendations and decisions on important matters.

4.1.4 Stakeholder Involvement Mechanisms

Key local stakeholders will be local communities and timber companies; their roles and functions are described in the Table below. Success of the project will depend on their cooperation and support. They will form an important component of the BZMC and will contribute ideas on sustainable development.

Stakeholder Participation Plan	
Stakeholder	Participation in project implementation
Local communities	Penan community to play key role in project development and co-management of BZ, as a source of manpower and local knowledge, assisting in studies and surveys, promoting NTFP & ecotourism. The Kelabit community will contribute to knowledge, solving issues on land use, involve in resource development & ecotourism
Timber industry	Will contribute to success of project by providing transport, accommodation & construction timber, assisting in boundary survey & contributing to community development activities
Erickson Air Crane Co.	Air lifting of construction materials, equipment and supplies to site
State agencies	Administrative, policies and decision making; direct and indirect support to project implementation; CSIU of FDS will be key partner in implementation

4.2 Reporting, Review, Monitoring and Evaluation

The schedule for reporting and project progress is summarized below.

Activity	Month of Project
Inception meeting	1st
Submit YPO 1 with consultants and CVs	1st
1 st PSC meeting & BZMC meeting	4th
Begin implementation	2 nd , 3rd
Submit progress reports	4th
2 nd PSC meeting & field monitoring	12th
2 nd BZMC meeting	12th
1 st Audit financial report	12th
Submit progress reports	12th
Schedule continues	Year 2

The PL and head of the CSIU will be directly responsible for monitoring progress of activities in the field. They will also coordinate with timber, helicopter and land transport companies, and ensure that materials

are acquired at the most competitive prices based on quotations as required by the government regulations. Reports will be submitted to the project coordinator. Towards the end of the project, trained local communities will be able to assist in monitoring of community-based activities and resource management.

4.3 Dissemination and Mainstreaming of Project Learning

4.3.1 Dissemination of project results

The project implementation team and appointed consultants will disseminate project results through progress and technical reports, workshops, discussions and dialogues. Awareness education will be incorporated during training of local stakeholders. Whenever possible, presentations on project progress and achievements will be made to ministers and top level government officers, and during conferences.

For local indigenous communities dissemination of project results will be in the form of knowledge and experiences that are acquired from participation and training. When usefully applied, the knowledge will help to improve their standards of living. Other results will be in the form of *tagang*, NTFP utilization and ecotourism. Ecotourism promotion will help to boost the industry in the highlands.

4.3.2 Mainstreaming project learning

The Lanjak Entimau and Pulong Tau projects have revealed some weaknesses in park management and enforcement, and have identified the potential threats. To address the problems, one of the projects' recommendations was that on-ground management must be reinforced, and this could be done by engaging the help of local indigenous peoples living near the parks.

The concept of buffer zones for TPAs in Sarawak had already been brought up for discussion during workshops organized by the Protected Areas and Biodiversity Conservation PABC Unit of the SFC and on other occasions, but there was no follow up (Oswald Braken, *pers. comm.*). The project's buffer zone guidelines will be vetted by FDS and SFC, and presented to the Ministry of Planning, Resource and Development and State Secretary. Once endorsed, it will be applied by FDS and SFC to sustain the project work. The guidelines will also serve as a useful reference for strengthening protection of other TPAs.

Another expected outcome of the project will be to request the State Government to consider establishment of buffer zones for all TPAs in the state. Learning from the project's experience, a cabinet paper for buffer zone establishment will be prepared giving reasons and justifications, with recommendations for relevant sections of the National Parks and Nature Reserves Ordinance (1998) and Wild Life Protection Ordinance (1998) to be amended. The paper will be submitted to the State Cabinet for consideration and approval. Once the amendments are adopted, the PTNP buffer zone will be the first to be gazetted, paving the way for other TPA buffer zones to be established.

Annex I. Profiles of the Executing Agency and Collaborating Agencies and 'Other Sources' Requested for Funds

(a) Forest Department Sarawak Headquarters

Wisma Sumber Alam,
93660, Petra Jaya,
Kuching, Sarawak

Tel: +6 082-445713

Fax: +6 082-445639

e-mail: itto@po.jaring.my

The Department was established in 1919 to implement policies on forests to ensure that SFM contributes to socio-economic wellbeing of the State and people by maintaining a balance between development and conservation. The Ministry of Planning and Resource Development is the Ministry in charge of the Department.

FDS is headed by the Director of Forests with two Deputy Directors. The SFC is the operating arm of the Department and is responsible for totally protected area management and biodiversity conservation under the PABC Unit. Regional offices are located in major cities and towns, each headed by a senior officer. As the EA, FDS will be responsible for securing funds for the project. Funds for operational and development are sourced from the State Government.

To implement ITTO projects, FDS will appoint a project coordinator and a chief local counterpart who will work closely with the PL. The CSI Unit that was created in January 2011 is intended to continue the project work and ensure sustainability. SFC will provide expertise for baseline research.

(b) ITTO Office

The ITTO office is located on the 5th floor of Wisma Sumber Alam, presently consisting of the PL, a research officer, administrative officer and a vehicle driver. If the BZ project proposal is approved and funded, the office will be maintained.

(c) 'Other Sources'

One other potential funding source is the Federal Ministry of Plantation Industries and Commodities.

Timber companies operating in the area will not provide direct financial support but will assist in making available land transport and accommodation in the timber camps for project staff. They will carry out road repair upon request to enable materials to be transported. Ravenscourt Sdn. Bhd., a subsidiary of Samling Group will be the main supporter of project.

In the past, Erickson Air Crane Company has helped to airlift materials at special cost as part of its community service policy, and will continue to do so if requested. **The company may be considered as a sub-stakeholder in helping to airlift materials and equipment to Long Manau at the beginning of the project.**

Annex II. Tasks and Responsibilities of Key Experts provided by the Executing Agency

1. Project Coordinator and Terms of Reference

Degree holder and senior officer with background on forestry and related issues, appointed from FDS.

Tasks and Responsibilities

- Direct contact point with ITTO;
- Chairs PSC meetings and BZMC meetings;
- Liaise with PL on matters relating to project implementation and assigning of project support staff from FDS;
- Coordinates preparation of official documents and cabinet papers for submission to government;
- Coordinates with other government agencies and stakeholders to enhance project implementation.

2. Chief Local Counterpart and Terms of Reference

Degree holder and senior officer of FDS with background in forestry, preferably with at least three years of experience in ITTO project work.

Tasks and Responsibilities

- Direct counterpart to PL;
- Plays a key role in project planning and implementation;
- Oversees project staff from FDS;
- As liaison officer with local stakeholders (timber companies and local communities) concerning project work, ensures smooth project implementation;
- Co-chairs BZMC meetings.

Annex III. Terms of reference of personnel and consultants and sub-contracts funded by ITTO

1. Project Leader

M.Sc. or Ph.D. holder in forest ecology, forestry or related subjects, preferably with at least 5 years of experience in leading and managing ITTO projects.

Task and Responsibilities

- Responsible for all aspects of project planning and implementation;
- Works directly with project coordinator and chief local counterpart from FDS and SFC;
- Liaises with key stakeholders on project implementation;
- Prepares and makes presentations on project's progress;
- Organizes project management team and BZMC;
- Helps to source project consultants and formulates work plans for consultants;
- Conducts training;
- Controls project fund and expenditure;
- Organizes PSC and other meetings and field visits by PSC members;
- Edits all technical reports for publication.

2. Research Officers

Degree holders in forest ecology, botany or zoology, preferably with three years experience in working with ITTO projects.

Tasks and Responsibilities

- Assists the project leaders in project organization and planning;
- Coordinates and participates in baseline studies in the buffer zone;
- Liaises with local stakeholders on matters relating to project implementation;
- Conducts training courses for young researchers participants;
- Assists in preparing progress reports and minutes of meetings;
- Assists in assembling information on forests and biodiversity, data analysis, geographic information system (GIS) and preparing thematic maps.

(ix) Biologists (Forest ecology, botany, zoology)

Degree holders in relevant fields, preferably with more than three years experience in working with ITTO projects.

Tasks and responsibilities

- Organize and carry out studies on forest ecology, flora and fauna and NTFP under supervision of the PL;
- Analyze and evaluate scientific data;
- Contribute to development of integrated buffer zone management guidelines;
- Make recommendations on suitable NTFP products to be developed;
- Assist training in scientific surveys;
- Prepare final technical reports.

(x) Technical Assistants

Diploma or degree holders or officers with more than five years experience in relevant fields and are able to work independently.

Tasks and Responsibilities

- Assist in organizing and planning field activities, recruit local workers;

- Participate in project implementation activities including baseline studies;
- Help to train local workers and participants;
- Survey and zoning of the buffer zone resources, collect information and prepare maps;
- On ecotourism, survey and mark jungle trails, collect and information materials;
- Supervise implementation of community activities like *tagang* and NTFP development.

(xi) **Local Assistants**

Possess local knowledge and experience of forests and their resources, preferably completed or passed Form 3 in a secondary school.

Tasks and Responsibilities

- As local resource persons on the forests and NTFP;
- Assist in implementation of project activities;
- Maintenance of project field centre and facilities;
- Assist in survey and collection of information on resource utilization;
- Assist in development and promotion of ecotourism.

Annex IV – CVs of project personnel from the Executing Agency

CURRICULUM VITAE

A. Biodata

Name	Zarina bt Haji Shebli
Date of Birth	16 September 1972
Nationality	Malaysian
Country	Malaysia
Place of Birth	Sarawak, Malaysia
Religion	Muslim
Race	Malay
Gender	Female
Marital Status	Single
Office Address	International Affairs Division, Forest Department of Sarawak, 5 th Floor, WismaSumberAlam, 93660, Jalan Stadium, Petra Jaya, Kuching Sarawak, Malaysia
Telephone	082 – 319152 (Office) 082 – 429214 (Home)
Email Address	Zarinas@ Sarawak.gov.my

B. Education Background

-
1. Bachelor of Science in Forestry (Forest Management), Agriculture University of Malaysia, Serdang, Selangor, 1993-1996
 2. Diploma in Forestry, Agriculture University of Malaysia, Bintulu, 1990 – 1993

C. Work Experience & Achievements

-
1. **5 November 1996 to present** Executive Forester, Forest Department Sarawak
 2. **5 November 1996-December 2006** National Parks & Wildlife Division

Responsibilities:

- Constitution of Totally Protected Areas (National Parks, Nature Reserves and Wild Life Sanctuaries)
- Conducting field survey of proposed TPAs ;
 - Preparing cabinet papers on proposals to constitute TPAs;
 - Assisting the Chief Park warden/ Chief Wildlife Warden to conduct hearing and investigate claims on rights and privileges by claimants in areas proposed as TPAs;
 - Planning and monitoring boundary cutting and maintenance of TPA boundaries
 - Land acquisition outside TPA boundaries for development of ranger stations, office, and interpretation centers.

Achievement

- Managed to assist the department to constitute at least 10 National Parks, 5 Nature Reserves and 2 Wild life Sanctuaries namely:

National Parks:

	Name	Area(ha)	Division	Date of Gazettement
1	Talang Satang National Park	19, 414 (wm)	Kuching	4 th Nov 1999
2	Bukit Tiban Natinal Park	8, 000	Bintulu	31 st May 2000
3	Maludam National Park	43 147	Sri Aman	31 st May 2000
4	Rajang Mangroves National Park	373	Sibu	3 rd August 2000
5	Gunung Buda National Park	6, 235	Limbang	18 th Jan 2001
6	Kuching Wetland National Park	6 610	Kuching	10 th Oct 2002
7	Pulong Tau NP	59 817	Miri, Limbang	24 th Mar 2005
8	UsunApau National Park	49 355	Miri	29 th Sept
9	Miri-Sibuti Coral Reefs National Park	186 930	Miri	19 th April 2007
10	Santubong National Park	1 410	Kuching	19 th July 2007

Nature Reserves:

No	Name	Area(ha)	Division	Date of Gazettement
1	Wind Cave Nature Reserve	6.16	Kuching	4 th Nov 1999
2	Sama Jaya (Stutong) Nature Reserve	37. 916	Kuching	23 rd Mar 2000
3	Semenggoh Nature Reserve	653	Kuching	20 th April 2000
4	Bukit Sembiling Nature Reserve	101	Limbang	22 nd June 2000
5	Bukit Hitam Nature Reserve	147	Limbang	22th June 2000

Wild Life Sancturries

No	Name	Area(ha)	Division	Date of Gazettement
1	Samunsan1 st Extension	16 706	Kuching	3 rd Aug 2000
2	Sibuti Wild Life Sanctuary	678	Miri	3 rd Aug 2000

- Managed to assist the department to initially gazette proposed areas as national parks, nature reserves and wild life sanctuary namely:

National Parks:

No	Name	Area (ha)	Division	Date of Gazettement
1	Bruit National Park	1,776	Sarikei	20 th Aug 1998
2	Gunung Buda National Park (Ext)	5, 062	Limbang	22 nd Jun 2000
3	Similajau National Park (E.1)	13, 124	Bintulu	22 nd Jun 2000
4	GunungMulu National Park(Ext.1)	5 725	Miri	22 nd Jun 2000
5	Pelagus National Park	2, 041.3	Kapit	30 th Nov 2000
6	GunungMulu National Park (Ext 1)	28 530	Miri	21 st Aug 2003

7	Bungo Range National Park	10 520	Kuching	21 st Aug 2003
8	UluSebuyau National Park	27 275	Samarahan& Sri Aman	4 th Sept 2003
9	Batang Ai National Park	8 105	Sri Aman	21 st Aug 2003
10	Bruit National Park (Ext)	2 095 (L) 10 655(WB)	Sarikei	21 st Aug 2003
11	Bukit Mersing National Park	11 053	Bintulu	21 st Aug 2003
12	Limbang Mangrove National Park	2 950 (LA) 1 340(WB)	Limbang	21 st Aug 2003
13	DeredKrian National Park	1 920	Kuching	21 st Aug 2003
14	Batang Lassa National Park	22 000	Sibu	1 st Julai 2003

Nature Reserve:

No	Name	Area(ha)	Division	Date of Gazettement
1	Fairy Caves	190.3	Kuching	23 rd Apr 1998

Wild life Sanctuaries:

No	Name	Area(ha)	Division	Date of Gazettement
1	Samunsan Wild Life Sanctuary (Ext.1)	602 (LA) 499(WB)	Kuching	22 nd Feb 2001
2	LanjakEntimau Wild Life Sanctuary (Ext)	23 850	Kapit	21 st Aug 2003

Note:LA : Land Area, WB: Water bodies

3. April 2001 to April 2004

Local Counterpart to the Joint Working Group of Malaysia – Netherlands project- Development and Management of Maludam National Park

Responsibilities:

- Jointly conducting socio-economic studies of the local communities in the vicinities of Maludam National Park.
- Planning and implementing local community projects for the communities living in the vicinities of Maludam N.P

4. January 2005 to September 2007

Chief Local Counterpart to ITTO Project PD 224/03 Rev.1 (F)-TBCA :Pulong Tau National Park

Responsibilities:

- Assisting the ITTO Projects Coordinator in planning, coordination and management of the Project's local counterparts and management of financial resources allocated to the Project;
- Assisting the Projects Coordinator, project Manager and Project Consultants in planning and organizing fields trips, Stakeholders Consultative Committee Meeting, local Community dialogues and attending meetings on matters relating to the TBCA and National Park;

- Preparing maps and descriptions and Cabinet Papers for the proposed extension of PTNP;
- Attending budget meetings and preparing estimates of budget for the ITTO-supported project as a part of Malaysian Government contribution to the project;
- Sarawak local person for the Joint TBCA Task Force between PTNP and KayanMentarang N.P.(KMNP)
- Liaising and coordinating with the Project Manager and other relevant government agencies and non-governmental organizations on the PTNP Project;
- Any other duties as assigned by the Projects Coordinator

5. April 2007 to September 2009

Seconded to ITTO as Project Leader of ITTO supported Project PD288/04 REV.2 (F): Development of LanjakEntimau Wild life Sanctuary as a Totally protected Area, Final Phase.

Responsibilities:

- Technical and administrative orientation of all project activities;
- Supervision of the use of the project funds;
- Providing support and backstopping to the PMU in her duties, particularly during the critical start-up and initial implementation of the project;
- Relations with SFD and other public agencies and institutions;
- Carry out the necessary lobbying for a timely decision on the extension of LEWS;
- Supervision of the selection of consultants;
- Giving guidance for the work of consultants, supervising them and controlling the ;
- quality of their results;
- Information on project's activities and work, targeting the public in general and key stakeholders in particular (State authorities, local authorities, local communities, NGO, international bodies);
- Actively participate in TBC activities between LEWS and BKNP such as visits, workshops, regular communication and exchange of information (reports,document,fax,e-mail,etc);
- Monitoring progress toward achieving project objectives and elaboration of all reports required by ITTO and by the project activities;
- Submit monthly progress report to Sarawak Forest Department on the activities and action taken for the month;
- Submit monthly progress report to Sarawak Forest Department on the activities and action taken for the month;
- Submit Yearly Plan Operation(YPO) and quarterly progress reports of the project;

- Provide secretarial support in the Project Steering committee;
- Any other duties as and when required by the Director of Forest from time to time;
- Assisting Project Manager of ITTO supported Project PD451/07 Rev.1(F): TBCA – Pulong Tau NP, Phase II as no. 4 above.

6. October 2009 to Present

Local Counterpart to the ITTO Project PD451/08 Rev.1 (F)-TBCA: Pulong Tau National Park
Responsibilities: Please refer para 4

7. January 2011 to present

Appointed as a head of newly created unit in the department, Community Service Initiatives Unit
Responsibility:

- Coordinating all the community projects and social interest under various divisions in the department
- Planning, managing, implementing and monitoring community based activities
- Preparing working paper for funding in regards to the community projects
- Working Collaboratively with other stakeholders including timber licensees in implementing community based activities

D. Courses, Training, Meetings, Workshop and Study Trips

1997	Workshop on Zonation of Totally Protected Areas, Wild Life and National Parks Development, Kuala Lumpur Malaysia
July 2001	Workshop on Environmental Impact Assessment, Mulu, Sarawak
Sept. 2001	Accompanied the Permanent Secretary of Ministry of Planning and Resource Management on a study tour to Kinabalu Park, Marine Park and Tawau Hill Park at Sabah, Malaysia
March 2002	Course on Executive Development Programme, Centre of Modern Management, Kuching Sarawak
13-31 May 2002	Course of Managing Conflict in Community Based Forestry, organized by RECOFT at Kasetsart University, Bangkok Thailand
Sept. 2002	Workshop on Development and Management of Maludam National Park, organized by the Joint Working Group Malaysia-Netherland at Merdeka Palace, Kuching Sarawak
18-19 Aug. 2003	International Conference on Bio tourism 2003 – The Treasures of Sarawak Rainforest, Hotel Rihga, Miri, Sarawak
21-24 Aug. 2003	International Conference on Local Land Use Strategies in a Globalizing World – Shaping Sustainable Social and Natural Environment, University of Copenhagen, Denmark
25-27 Sept. 2003	Workshop on Natural Resources, Environment and Development (NARED) 2003, organized by University Malaysia Sarawak at Hilton Hotel, Kuching, Sarawak
20 Jan-14 March 2004	Course of Sustainable Forest Management in Conservation Areas, Organized by the Japanese International Cooperation Agency (JICA) at Forest Training Institute, Hachioji, Japan.
23-30 August 2004	Study Tour to Sabah Kinabalu Park and Kinabatangan Wild Life Sanctuary, Sabah, sponsored by the Joint Working Group Malaysia-Netherlands (Development and Management on Maludam National Park)

April 2006	Representing Director of Forest to present a paper during HOB Workshop in Brunei Darussalam
April 2008	Workshop on Strategic Plan of Action for HOB and attended the 2 nd Trilateral Meeting on HOB at Pontianak , Indonesia
16 June - 4 July 2008	International Visitor Leadership Programme of the United States Department of State: Heart of Borneo Environmental Management Issues
December 2008	Attend the TBCA Meeting at Ministry of Forestry Indonesia, Jakarta, field visit to Bogor

E. Others Contributions

1997	Coordinator for the Organizing Committee on the Study Tour to Sabah for the Local Communities of the Constitution of Talang Satang National Park
October 2002	Member of the Organizing Committee FOR The 3 rd BIMP-EAGA Working Group on Forestry and Environment at Hilton Hotel, Kuching, Sarawak
February	Coordinator for The Study Tour of the Local Communities in the vicinity of Maludam National Park to Matang Wiuld Life Centre, Telaga Air, Sama Jaya Nature Reserve
November 2003	Chairman of the Workshop on Socio-economic and Eco tourism for the local communities in the vicinity of Maludam National Park, Damai Beach Resort, Santubong, Kuching
October 2003	Chairperson of the Secretariat for the Seminar on ASEAN Cluster and Trans-border World Heritage Site Nomination, 21-23 October 2003, Holiday Inn Hotel, Kuching, Sarawak
14 April 2004	Coordinator of the Organizing Committee on the Visit of the Royal Ambassador of Netherlands to Maludam Village and the presentation of Certificates to members of Special Park Committee
8 – 10 October 2004	Chairperson of the Organizing Committee for the Cleanliness Campaign at Maludam, Workshop on Handicraft and Workshop on Malay Heritage
21 - 24 Nov 2004	Coordinator for the workshop on Conservation Awareness on the Forest Ecosystem and Function of Maludam NP, Kuching Park Hotel, Kuching (Local Communities Program)
30 Nov – 1 Dec 2004	Focal Person on the Opening Caremony and Workshop Organization on the Maludam Ramin Project workshop Joint Working Group Malaysia Netherlands, Merdeka Palace, Kuching, Sarawak
28 Dec 2005 – 3 Jan 2006	Coordinator for the IUCN Evaluation Mission to Betung Kerihun National Park on the Nomination of Lanjak Entimau Wildlife Sanctuary and Betung Kerihun National Park as World Heritage Site
January 2008	Focal person the organizing committee for a National Expert Meeting on HOB at National Level and trip to Gunung Mulu NP
June 2009	Coordinator for the organizing committee of the Launching of Environmental Awareness & Education Program at SK Ba'kelalan, Lawas

CURRICULUM VITAE

Biodata

Name	Sarzali Bin Sahamat
Date of Birth	25 March 1954
Nationality	Malaysian
Country	Malaysia
Place of Birth	Sarawak, Malaysia
Religion	Muslim
Race	Malay
Gender	Male
Marital Status	Married
Home Address	No.43, Kampung Tupong Batu Jalan Merdeka, Petra Jaya 93050 Kuching, Sarawak, Malaysia.
Office Address	International Tropical Timber Organization Sarawak c/o, Forest Department Sarawak, 5 th Floor, Wisma Sumber Alam Jalan Stadium, Petra Jaya, 93660 Kuching, Sarawak, Malaysia.
Telephone	082-444687 (Home) 019-8841396 (Handphone)
E-mail Address	sarzalis58@yahoo.com

B. Educational Background

Lower Secondary Education :St.Thomas Secondary School,Kuching Sarawak
(1968 – 1970) – Sarawak Junior Certificate
Upper Secondary Education : Tunku Abdul Rahman Secondary School. Kuching
Sarawak (1971) – Malaysian Certificate of Education.

C. Working Experience

2 May 1972 – August 1972	Daily Rated Employee as Road Surveyor Public Works Department Sarawak
17 November 1972 – 26 July 1979	Timekeeper/Tally Clerk Public Works Department Sarawak
27 July 1979 – 3 December 1990	Promoted to Clerk Grade C.11 Public Works Department Sarawak
4 December 1990 – 17 December 2000	Clerk Grade C.11 State Treasury Department of Sarawak
18 December 2000 – 17 July 2002	Senior Clerk (Finance) Grade W.7 State Treasury Department of Sarawak
18 July 2002 – 31 March 2009	Administrative Assistant (Finance) State Ministry of Land Development Sarawak
1 April 2009	Retired from Sarawak Government Civil Service on attaining the age of 55 years old.

D. Scopes Of Work

2 May 1972 – August 1972	Locating and surveying affected lands boundaries Surveying and setting up road alignment of more than 20 km proposed dual carriage way from city centre to new
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	Administrative Area in Petra Jaya, Kuching, Sarawak inaccordance with the Engineering Drawing Doing soil testing along the road alignment to determine the depth of hardcore soil
17 November 1972 – 26 July 1979	Processing of leave application submitted by PWD Personnel Maintainence and updating personnel leave record Maintenance and updating personal record of service of PWD personnel Attending to official correspondence relating to staff's personal matters
27 July 1979 – 3 December 1990	Processing pension documents in respect of PWD Sarawak personnel due for retirement Handling of Industrial and Manual Group Employees of PWD Sarawak personnel recruitment, promotion, upgrading and retirement
4 Dec 1990 – 31 Dec 2001	Attached to Registry Section of State Treasury Department, managing of department's filing System for 3 years Assigned to reconciliation work on State Trust Accounts
2 Jan 2002 – 17 July 2002	Checking of departmental Payment Vouchers Management of Departmental Vote Ledger
18 July 2002 – 31 March 2009	Managing Account of Expenditure for State Ministry of Rural and Land Development Sarawak
1 April 2009	Retired from Sarawak State Government service.

E. Other Contribution

1 June 2001 – 31 May 2011	Board Member of Government Employees Provident Fund (Appointed by Ministry of Finance Malaysia)
1996 – 2002	Secretary of Employee Suggestion Scheme under State Treasury Department's Quality Improvement Committee – The task was to compile monthly suggestions from the State Treasury department Sarawak staff for evaluation by the Management
1986 – 2001	Secretary of Parents Teachers Association – Actively involved in the soliciting of school building fund, to improve and provided a better of a learning environment to pupils of one of a local primary school in the Kuching City of Sarawak

F. Recognition

Long Service Medal Award 1992
Excellent Service Appreciation 1996
Public Service Medal State Award (Bronze) 1998

CURRICULUM VITAE

WILHELMINA CLUNY

S2F6, Lee Ling Villa,

Taman Sri Perkasa, Jalan Matang, 93050, Kuching, Sarawak

Telephone: 0138445027

Email: willcluny@gmail.com

PERSONAL DETAILS

Nationality : Malaysian
I.C. No : 830626-13-5680
Date of Birth : 26 June 1983
Gender : Female
Race : Iban
Marital Status : Single

EDUCATION BACKGROUND

2001 to 2002, Kolej Chermaj Jaya

Matriculation- Life Science, CGPA: 2.25

2002 to 2005, Universiti Malaysia Sarawak (UNIMAS)

Bachelor of Science (Hons) in Animal Resource Science and Management, CGPA: 3.31

Dean's List recipient 2003/2004 & 2004/2005

RESEARCH ACTIVITIES AS UNDERGRADUATE

- August 2003 of Conducted a study on diversity of Rhopalocera (butterflies and skippers) in the vicinity Fairy Cave, Bau, Sarawak.
A total of 76 species of butterflies were recorded.
- November 2004 Involved in the Migrant Shorebird Project, Pulau Buit, Sarikei, Sarawak as a volunteer.
Helped to identify migrant shorebird species and monitored their feeding behavior
- January 2005 Conducted a wildlife survey at Niah National Park, Miri, Sarawak
As a team leader; 9 species of mammals, 24 species of birds and 4 species of reptiles were recorded. A wildlife checklist was also prepared for the National Park.

March 2005 Final year research project, entitled "Quantifying Sexual Size Dimorphism in *Penthetor lucasi* (Dusky Fruit Bat) based on Cranial and Dental Characteristics using Logistic Regression.

A statistical formula based on cranial and dental characteristics was developed for predicting male and female specimens of the Dusky Fruit Bat.

Assist in collecting bat samples for DNA studies at Tubau, Bintulu for UNIMAS and Grand Perfect Sdn. Bhd.

SKILLS

Research

Familiar with various approach for wildlife studies:

- (g) field techniques: camera trapping, line transect, mist-netting and bird banding;*
- (h) using computer simulations to estimate density, abundance and predicting species distribution*
- (i) DNA*

Computer Applications

Microsoft office; Adobe Photoshop; Adobe Illustrator, iMovie, R statistics, MARK, DISTANCE, PRESENCE, MINITAB and SPSS

Language

Proficient in English, Bahasa Malaysia and Iban (speaking and writing)

WORKING EXPERIENCE

September 2005 to May 2012 Research Officer for ITTO-supported Projects: Pulong Tau National Park (PTNP) Phases I & II and Lanjak Entimau Wildlife Sanctuary (LEWS) Phase IV.

- Responsibilities : In the PTNP project:
- 43 Conducted a study on mammals in logged over forests in Batu Lawi and Kubaan using camera trapping;
 - 43 Conducted a study on birds in the extended area of Batu Lawi;
 - 43 Conducted a study on birds in Pa' Rabata and Lepo Bunga, Gunung Murud;
 - 43 Conducted a study on birds in the burnt forests of Kelisa Camp, Ulu Baram;
 - 43 Surveyed and mapped jungle trail from Bario to Batu Lawi;
 - 43 Surveyed and mapped cultural sites (burial sites, megaliths and non-megaliths), salt licks and salt mines within timber license areas in the Northern Highlands;
 - 43 Developed nature education modules for students in Bario;
 - 43 Helped to establish Nature Resource Centre for schools in Bario and Ba' Kelalan;
 - 43 Assisted in community-based activities.
- In the LEWS project:
- 4. Assisted in the development of the Lanjak Entimau documentary book;
 - 5. Conducted a study on importance of community-use zone in

the periphery of the LEWS as a wild life corridor for mammals and birds.

6. Developed modules for nature education for school children in LEWS and BANP;
7. Developed posters on introduction to the Project, biodiversity in LEWS and community-based activities.
8. Organized an educational tour for school children from Ng. Ju, Ulu Mujok to Similajau and Niah National Park, and Universiti Putra Malaysia, Bintulu.
9. Assisted in community-based activities

PUBLICATIONS

Cluny, W. 2005. Quantifying Sexual Size Dimorphism in *Penthetor lucasi* based on Cranial and Dental Characteristics using Logistic Regression. *B.Sc (Hons) Theses. Universiti Malaysia Sarawak.*

Chai, P.P.K. & Cluny, W. 2006. Management of Cultural Heritage and the Pulong Tau National Park in the Northern Highlands as Catalysts for Development. *Paper presented at the Highlanders Convention on 3rd March 2006, Mega Hotel, Miri.*

Chai, P.P.K, Cluny, W. & Grinang, J. 2006. Highland Biodiversity Conservation: The Pulong Tau National Park. *Paper presented at the Borneo Convention on Holiday Inn, Kuching.*

Cluny, W. & Chai, P.P.K. 2007. Cultural Sites of the Northern Highlands. *International Tropical Timber Organization PD 224/03 Rev. 1(F) Transboundary Biodiversity Conservation Area- The Pulong Tau National Park, Sarawak State, Malaysia.* Technical Report.

Lading, E. & Cluny, W. 2009. Importance of Community-use Zones in the Periphery of Lanjak-Entimau Wildlife Sanctuary as a Wildlife Corridor. *International Tropical Timber Organization PD288/04 Rev. 2(F) Development of Lanjak-Entimau Wildlife Sanctuary as a Totally Protected Area, Phase IV (Final Phase).* Technical Report

Annex V - Recommendations of the 44th Expert Panel

Summary of recommendations of the Expert Panel and the respective modifications

1.	<u>Refine the project title by excluding 'development of guidelines' for buffer zone management for the Pulong Tau National Park as the project work will focus on integrated buffer zone management through active involvement of indigenous people</u>	<u>This has been done</u>
2.	<u>Further improve the engagement of indigenous people to ensure their full and effective participation in project implementation. In this regard, Table 1 (Stakeholder analysis) should be improved by further elaborating the problems, needs and interests of indigenous people as well as their involvement in project implementation</u>	<u>This is shown in sub-section 2.1.2 with improvement of Table 1</u>
3.	<u>Further improve the problem analysis apart from the problem tree by clearly identifying one key problem and associated causes and sub-causes. Fully describe the underlying causes of the key problem related to the management of the buffer zone for the Pulong Tau National Park</u>	<u>Please refer to sub-section 2.1.3</u>
4.	<u>Revise the ITTO budget by scaling down the project personnel while increasing contributions of the Executing Agency. In particular, the monthly honorarium for the project leader should be reduced. Justify budget item 14 (Employers contribution to EPF 13%)</u>	<u>Budget revised. Under the Malaysian Employees Provident Fund (EPF) Act 1991, all employees and employers of the private sector are mandated to contribute to the fund for retirement. The rates of monthly contribution are 11% of deductible wage from the employees and 13% of deductible wage from the employers</u>
5.	<u>Further improve the sustainability of the project by describing ways in which local personnel and indigenous people will be equipped to assume responsibilities after project completion</u>	<u>Please see sub-section 3.2.1</u>
6.	<u>Provide CV of project personnel provide by Executing Agency</u>	<u>Please see Annex VI. The CVs for senior personnel presently attached to the project are given; no CVs for the junior officers as they are more liable to be transferred to other units</u>
7.	<u>Include an annex that shows the</u>	<u>Included as Annex V</u>

	<u>recommendations of the 44th Expert Panel and the respective modifications in tabular form. Modifications should also be highlighted (bold and underline) in the text.</u>	
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Documents Consulted

1. ITTO Manual for Project Formulation, 2nd Edition, 1999.
2. ITTO Mission Report to Sarawak, 1989/1990.
3. ITTA 1994.
4. ITTA 2006.
5. ITTO Yokohama Action Plan 2002-2006.
6. Chai, P.P.K., Cluny, W., & Grinang, J. (2006). Highland Biodiversity Conservation: The Pulong Tau National Park. Paper presented at the Borneo Convention at Holiday Inn, Kuching.
7. Lim, M.T. (2006). Ecological Survey of Forests in the Pulong Tau National Park. Report for International Tropical Timber Organization Project PD 224/03 Rev.1 (F) Transboundary Biodiversity Conservation Area - The Pulong Tau National Park, Sarawak State, Malaysia.
8. Pearce, K.G. (2006). The Flora of Pulong Tau National Park. Report for International Tropical Timber Organization Project PD 224/03 Rev.1 (F) Transboundary Biodiversity Conservation Area- The Pulong Tau National Park, Sarawak State, Malaysia.
9. Sia, P.C. (2007). The Geomorphology and Soils of Pulong Tau National Park. Report for International Tropical Timber Organization Project PD 224/03 Rev.1 (F) Transboundary Biodiversity Conservation Area - The Pulong Tau National Park, Sarawak State, Malaysia.
10. Sidu, J. (2007). A Socio-economic Study of the Communities Living Adjacent to the Pulong Tau N.P. Report for International Tropical Timber Organization Project PD 224/03 Rev.1 (F) Transboundary Biodiversity Conservation Area - The Pulong Tau National Park, Sarawak State, Malaysia.
11. Tipot, E., Henry, J. & Chai, P.P.K. (2009). Management of the Pulong Tau National Park Resource Use by the Penan Community. Report for International Tropical Timber Organization Project PD 224/03 Rev.1 (F) Transboundary Biodiversity Conservation Area - The Pulong Tau National Park, Sarawak State, Malaysia.
12. Relevant technical reports from Lanjak Entimau Wildlife Sanctuary project.
13. Sarawak Forest Policy (revised 1997).
14. Sarawak Land Classification Ordinance (1948).

Acknowledgement

This project proposal was prepared by Dr. Paul P. K. Chai who was the project leader for the LEWS project from 1995 to 2004; and project leader for PTNP project, phases I and II from 2005 to present.

The EA would like to thank the PSC of Pulong Tau Project Phase II for the project idea and especially to Dr. Hwan Ok Ma of ITTO Secretariat and Dr. Juergen Blaser of Switzerland for their valuable inputs in preparing the proposal.